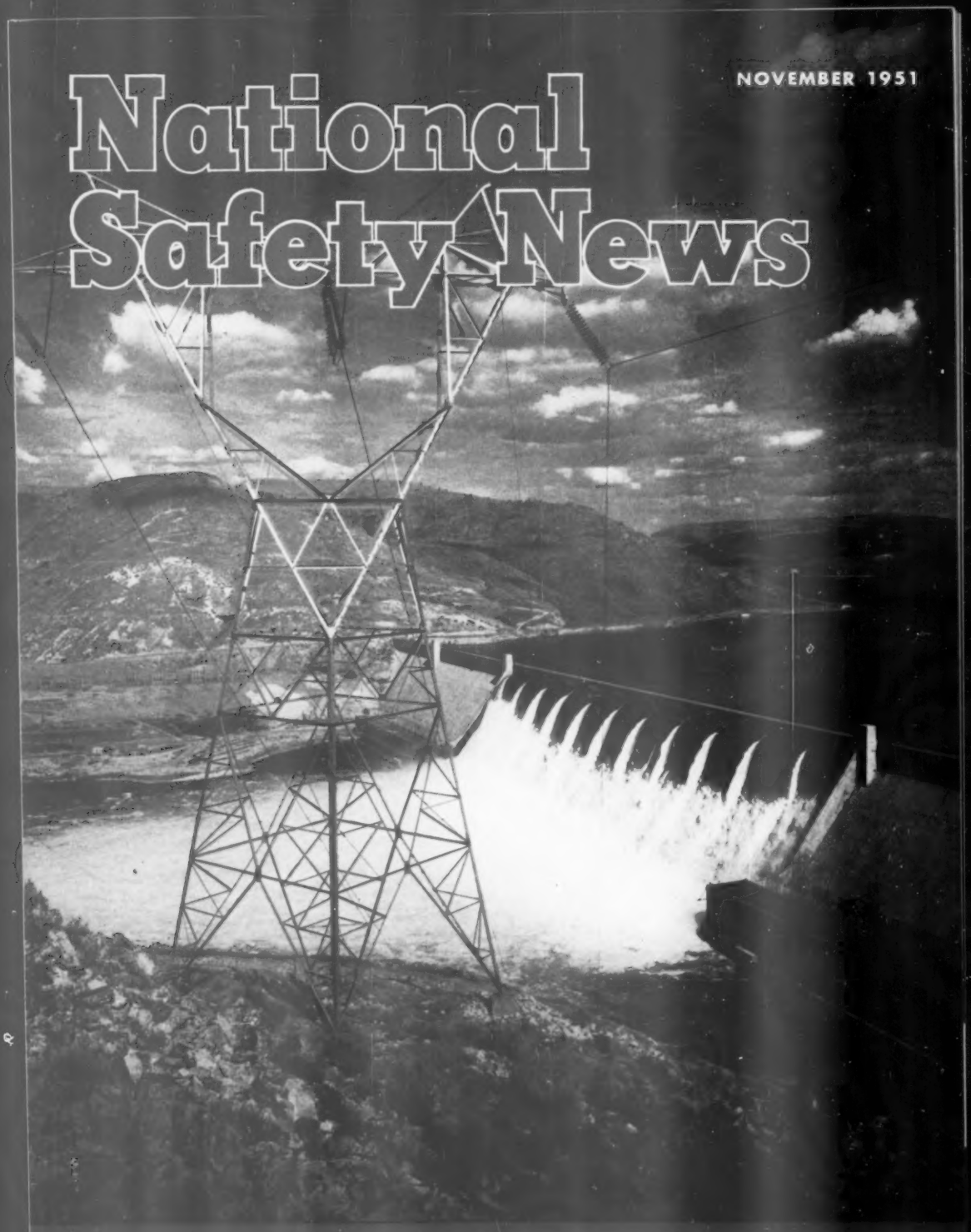
NOVEMBER 1951

National Safety News



THE GRAND COULEE DAM
(See page 20)

- Six Steps Ahead 18
- Preparing the Safety Manual 34
- An Extra Janitor for the Plant 36

NEW FABRIC-Longer WEAR

M.S.A. Chemklos

... the work clothes that wear ON when others wear OUT!

Made of **Dynel**
the New Fabric

Resists

CAUSTICS
ACIDS
Wear
Moths
Mildew
Shrinkage
Snagging
Tearing

M.S.A. ChemKlos—made of Dynel, the New Fabric—are rolling up impressive durability records in acid and caustic operations where ordinary work clothes eat away or wear away after comparatively short periods. In many instances, users report that ChemKlos last at least 8 to 10 times longer.

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You'll find too, that workers will appreciate their roomy comfort and neat appearance.

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For work clothes that last and last insist on this label

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PITTSBURGH, PENNSYLVANIA

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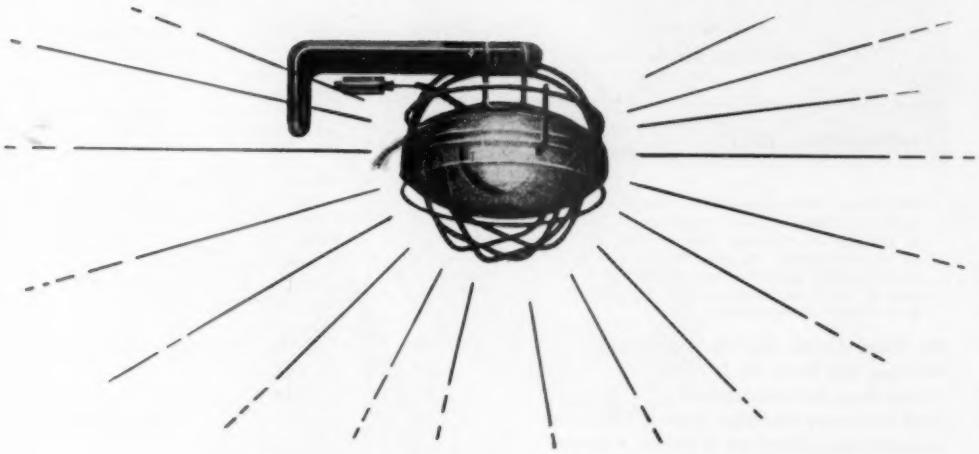

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National
SAFETY NEWS

Published monthly by
National Safety Council

NOVEMBER, 1951 Vol. 64, No. 5

THE COVER: *Grand Coulee Dam, largest concrete structure in the world, is a combined power and irrigation project. The lake formed by damming the Columbia river stretches 150 miles upstream to the Canadian border. The power line tower in the foreground carries power from the dam to Northwest industries. For an article on safety work on the Grand Coulee project, see page 30. (Photo courtesy U. S. Bureau of Reclamation.)*

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29,650 copies of this issue were printed.

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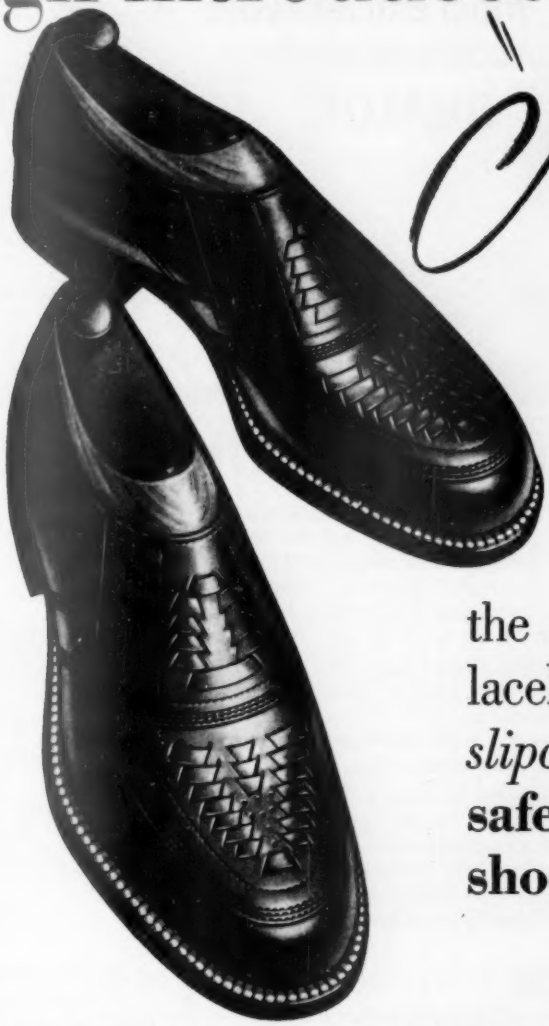
Lehigh introduces *Jets*



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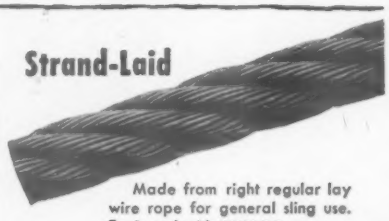

Made from right regular lay wire rope for general sling use. Equipped with **DUALOC.**

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Production Up, Workers' Skill and Morale on Top When You Put a Coppus Blower or Heat-Killer In!

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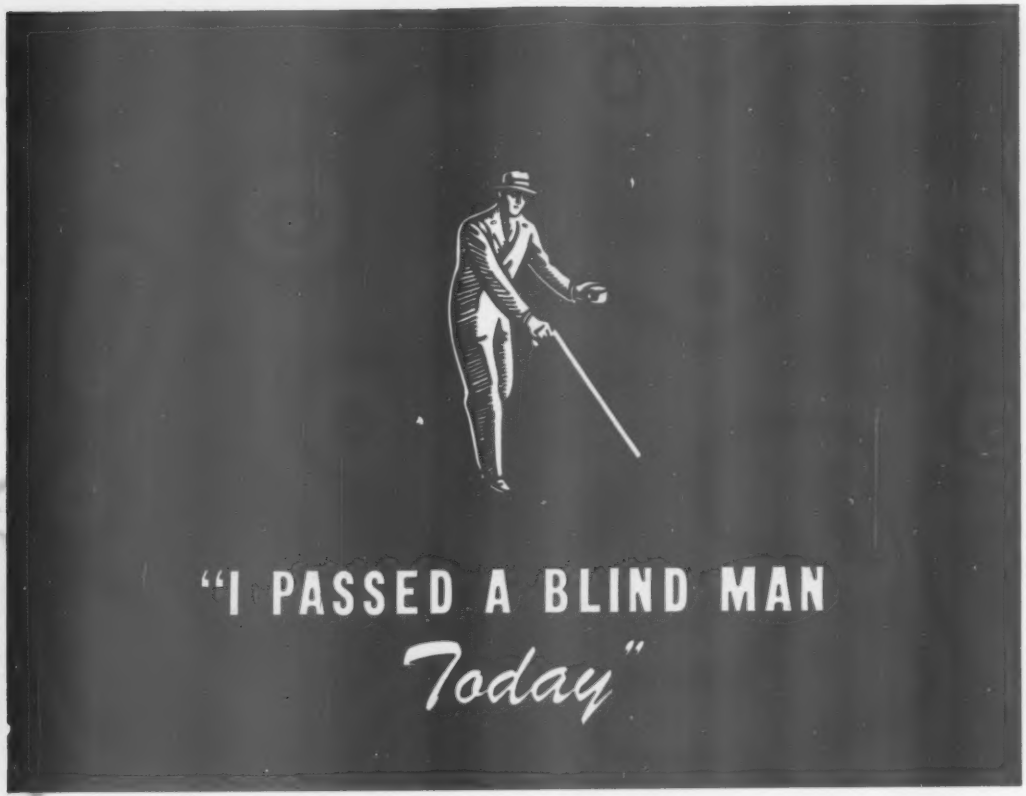

1 SELL EYE SAFETY TO EMPLOYEES
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2 SAFETY GLASSES FOR EACH JOB
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For at least 50% of your workers prescription lenses are necessary to working efficiency as well as to safety. Your B&L distributor offers prompt prescription service on all types of industrial eyewear.

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The "one" who is thoughtless—who understands the purpose of eye safety measures *only* when it's put to him dramatically, graphically.

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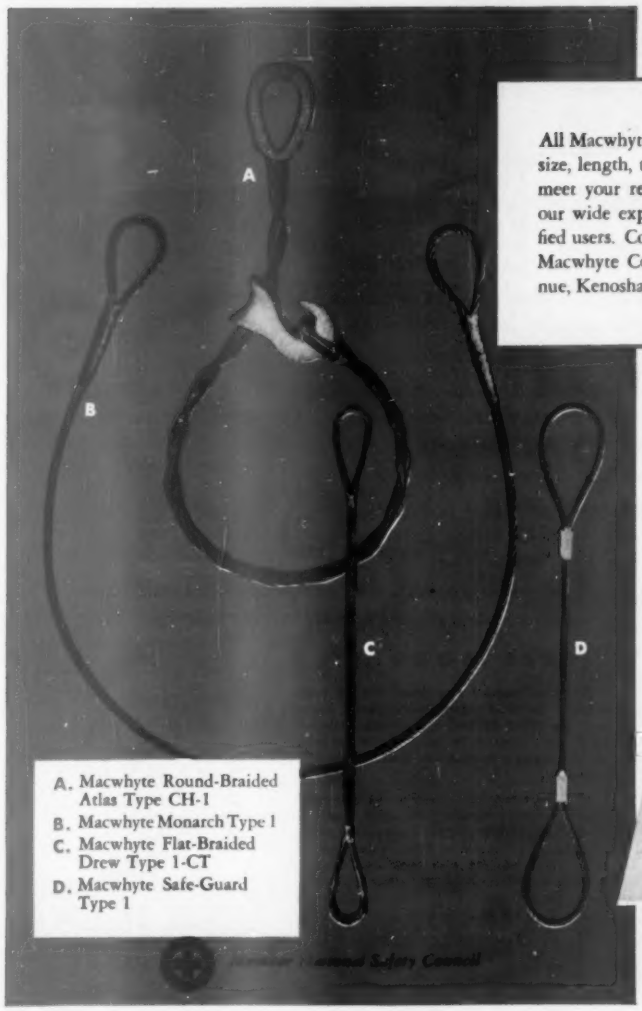
Wide variety of sizes and types for your needs



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was this slip necessary?

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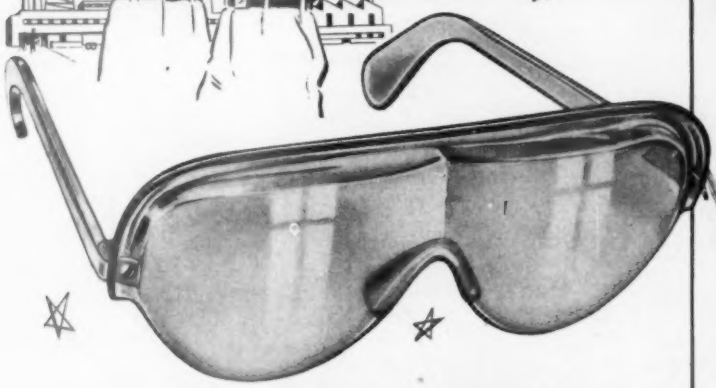
LEGGE SYSTEM
of Safety Floor Maintenance

THE "SPECTACLE" TO SEE BEFORE YOU BUY!



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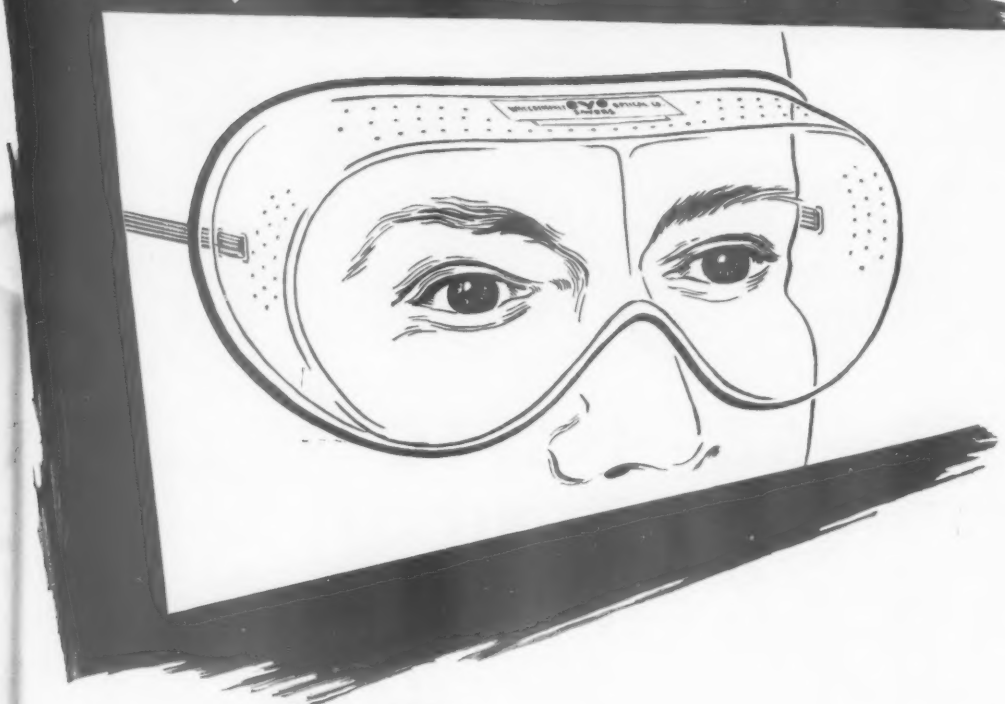

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CETOX makes all floors super safe —especially throughout year's 30% inclement weather when the risk of slips and falls is greatest.

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Longer Lasting
Greater Comfort
More Protection

Protective Garment Family

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- SPLIT TYPE APRON
- BIB OVERALL
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- OPEN-BACK JACKET
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For further information on garments suited to your needs—Write today for booklet No. 531.

STANDARD SAFETY EQUIPMENT COMPANY
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Iron Age Bulletin

ALL NEW

Forecast: Strong and Safer — *Pittsburgh* — *November, 1951*

IT'S NEW—IT'S NEWS!

THE SENSATIONAL

Iron Age "Cruiser"

SAFETY SHOE

with

NEOPRENE CREPE SOLE

●

NEW AND BETTER THESE 6 WAYS

NEW KLOMP PATTERN—Built like a bulldozer yet gentle on the foot, easy on the eye.

NEW WINGUARD STEEL TOE BOX—The patented sloping wings absolutely prevent buckling under extreme pressure.

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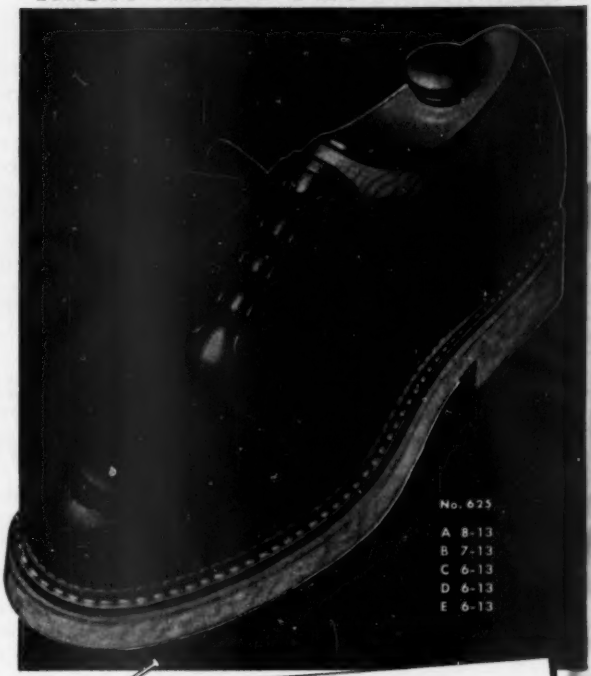
NEW PACIFATE PROTECTED LINING—by Pacific Mills. Stronger, decay resistant, more sanitary, prevents cut-throughs.

NEW ARMSTRONG CORK FILLER—An absorbent inner cushion that keeps insoles smooth—found only in shoes of the highest quality.

IRON AGE DOES IT AGAIN!



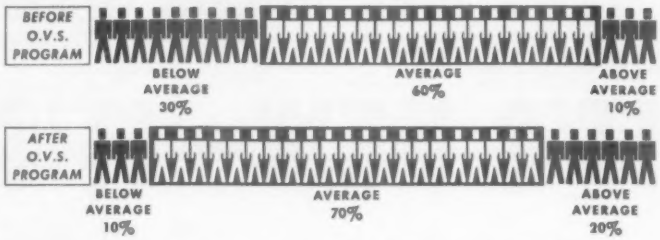
Here's the ne plus ultra in safety shoes. A brand new, grand shoe that can be proudly worn in complete safety by any man, on any job without conscious effort. It's called the "Cruiser" because workers "cruise along" in all-day comfort thanks to the thick cushion of pure, durable, slip resistant Neoprene crepe underfoot.

Ask your Iron Age representative to demonstrate the six big features that set the "Cruiser" head and shoulders above all other safety shoes . . . in appearance, in rugged construction, in long wearing satisfaction. Better get your stock order in now and be sure to order a pair for yourself. One look will tell you why.

Iron Age DIVISION
H. CHILDS & CO., INC. • PITTSBURGH 22, PA.

BAUSCH & LOMB
OCCUPATIONAL VISION SERVICE
Case History

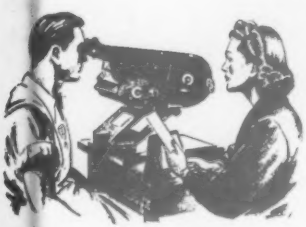
High Producers Among Winder Tenders *DOUBLED* at Rocky Mount Mills...



Writes John Scott, Jr. Personnel Director, Rocky Mount Mills, Rocky Mount, N. C.:* "The Bausch & Lomb Occupational Vision Service enabled us to identify visually inept applicants and, wherever possible, to direct current personnel to occupations where their visual performance measured up to that of the best operator on the job . . . winder tenders in our finishing department furnish a typical example. Before the program was started, income broke down like this: 30% below average, 60% average, 10% above average. But once a visual criterion was developed, substandard employees were referred to eye doctors for rehabilitation, and clinically subnormal employees directed to jobs where their vision was adequate. Now, low earners are 10%, average 70%, high 20%. Other departments followed suit. Result—increased production, employee satisfaction, product quality!"

**Reprint of Mr. Scott's complete article available on request.*

A PROVED METHOD *To Help Your Plant make money 9 Ways!...*



It's a matter of record that 4 of every ten industrial workers are visually unqualified for satisfactory performance on their jobs (established by the records of millions of visual performance tests of industrial workers in more than 4,000 different job categories). When visual skills are correlated to job requirements, working efficiency is notably increased. The Bausch & Lomb Occupational Vision Service is a scientific method for meeting this problem of "Eyes for the Job." *Employee participation is voluntary...and workers like the program.* Benefits which accrue in plants using O.V.S. (benefits which can accrue in *your plant,* too) include:

1. **Improved quality of production**
2. **Increased production per worker**
3. **Reduced waste of materials and work rejects**
4. **Improved accident record**
5. **Reduced labor turnover**
6. **Lowered training cost**
7. **More effective placement**
8. **Reduced absenteeism**
9. **Improved employee relations**

MAIL TODAY!

Send for the brochure "Eyes Right for the Job," which tells what the Bausch & Lomb Occupational Vision Service is, how easily it can be administered in your plant, and at what low cost.

BAUSCH & LOMB OPTICAL CO.
802-11 St. Paul St., Rochester 2, N. Y.

Please send me the brochure "Eyes Right for the Job," and complete details on the Bausch & Lomb Occupational Vision Service.

Name ..... Title .....

Company .....

Street ..... City ..... Zone ..... State .....

25 days

of the hardest kind of wear... and there's still a WHIZ CHECK-SLIP FINISH shining on this floor!

TWENTY-FIVE DAYS before this photo was taken, two thin coats of WHIZ CHECK-SLIP were put on this asphalt tile floor. Since then more than 15,000 racing fans a day have tracked dirt and sand—even water—back and forth across the floor on their way to the track's betting windows. Here at the Garden State Park CHECK-SLIP was being tested as a possible answer to the park's serious floor maintenance problem. The Superintendent's letter speaks for itself. "CHECK-SLIP has answered our needs 100%..."! Here's proof that CHECK-SLIP is anti-slip, hard and lustrous, long-wearing and economical. CHECK-SLIP gives outstanding performance on all types of flooring. Try it on your floors for safety with economy!

GARDEN STATE RACING ASSOCIATION

Garden State Park
P. O. Box 311
CAMDEN 1, NEW JERSEY

November 6, 1950

Industrial Aviation Division,
R.M. Hollingshead Corporation,
Camden, 2, New Jersey.

Gentlemen:

In order to improve the appearance of our main line first floor level, we have laid more than 15,000 square feet of asphalt tile over cement flooring during the past year.

This immediately posed a serious problem for our maintenance force. First in importance was to find an absolutely non-skid floor material, secondly a product that would shine, and in the third instance, a material which offered maximum floor protection. We tried many non-skid waxes, but none could qualify for our first requirement. We contacted several leading maintenance supply companies, but not one of them had a product which met our three qualifications.

Your organization, however, realizing the vast possibilities, began experimenting and developed this Check-Slip. For the past 18 days of our 1950 Fall meeting, we have had two coats of Whiz Check-Slip on our asphalt tile floors. These coats were applied before the start of the meeting, and although we had an attendance of 365,861, there was no necessity to add another coating, during that period.

From our standpoint, Whiz Check-Slip has answered our needs 100%, and we predict a brilliant future for it.

Very truly yours,

William S. [illegible]
Cleaning-Maintenance Supt.

WSH:jmf

REAL MAINTENANCE ECONOMY!

Maintenance at the Garden State Park consisted only of sweeping clean, then buffing the CHECK-SLIP to renew lustre.

Other advantages—No floor discoloration, not self-contaminating, non-inflammable. Available in 1, 5, 30 and 55-gallon sizes.

TESTED AND CERTIFIED BY UNDERWRITERS' LABORATORIES, INC.

Contains No Wax!

Whiz

WHIZ INDUSTRIAL-AVIATION DIVISION of the
R. M. HOLLINGSHEAD CORPORATION
Leader in Maintenance Chemicals
Camden 2, N. J.

ANOTHER HY-TEST PLUS..

Bol Tan leather insoles

Now, at no extra cost you can provide your workers with longer lasting safety shoes... Hy-Test Safety Shoes with Bol Tan leather insoles.

After years of research, experimentation and testing, the makers of Hy-Test Safety Shoes have perfected Bol Tan, a revolutionary new sweat-resistant insole that adds up to 100% to the life of Hy-Test shoes. Tested under foundry working conditions Bol Tan insoles were not only found to outlast ordinary insoles, but remain extremely flexible and comfortable throughout the life of the shoe.

No other safety shoes feature Bol Tan, a Hy-Test exclusive; developed, proved and produced by International Shoe Company.

Bol Tan leather insoles assure up to twice the wear per pair

Bol Tan insoles will not curl, crack or dry out because of perspiration

If You Missed Seeing BOL TAN LEATHER INSOLES

at the National Safety Congress, may we urge you to write immediately for a free booklet giving complete details on the many advantages of this revolutionary and exclusive new Hy-Test feature.

Address:

Dept. W • Hy-Test Division
International Shoe Company
St. Louis 3, Missouri

HY-TEST SAFETY SHOES

HY-TEST SAFETY SHOES

NATIONAL SAFETY NEWS

NOVEMBER 1951

NOW TO WORK!

THE SAFETY MOVEMENT is one of the outs.anding examples of cooperation in our time. Hundreds of organizations and thousands of individuals are enrolled in a common cause.

The 39th National Safety Congress, just concluded, was a memorable event in the history of the safety movement. In attendance, participation and interest it reached a new peak. To all those who took part, the Council extends the grateful thanks of its membership.

More than 12,000 delegates, representing practically every phase of business and public life, took part in the Congress. Their participation may be regarded as evidence of confidence in the National Safety Council's leadership.

That confidence imposes upon us all a tremendous responsibility. Can we arouse, inspire and guide enough people and organizations in programs effective and far reaching enough to meet the problems of today and tomorrow?

As President Dearborn told the members assembled at the Annual Council Meeting, it's time for plain talk. In his address, printed elsewhere in this issue, he points out some serious gaps in our program of cooperation. These gaps must be closed and our whole line strengthened if we are to make the progress in this "cold war" at home.

It is hardly necessary to reiterate that we are facing an emergency which demands all our human and material resources. The fact that we are not yet involved in World War III should not lull us into a feeling of false security.

This year the nation is reminded that the number of men who have been sacrificed in its wars since 1875 has passed the million mark. Sometime before the end of the year, barring a miraculous reversal of the trend, the millionth victim of traffic accidents since the turn of the century will join the long list of victims.

Also distressing is the toll of fire. Homes, factories and forests all go to feed these flames, and the intangible losses in their destruction exceed even the tremendous material loss. Our enemies would be willing to sacrifice thousands of men and planes to cause as much destruction as accidents and fires cause each year.

We are all worried about inflation—and with good reason. Yet these preventable losses are accelerating the inflationary forces.

The time is past when we can sit down and enjoy the negative satisfaction of figuring out the number of lives that have been lost if the accident rates of 1913 had continued unchecked. The methods which have brought results in the past must be studied, revised and strengthened to cope with growing problems.

Let's get busy. And, as Mr. Dearborn also reminds us, let's not worry about who gets the credit for what we can accomplish working together!

INTERNATIONAL TIES

IN RECENT WEEKS many visitors from other countries have visited the National Safety Council offices to study the techniques and organization of carrying on accident prevention and occupational hygiene programs. Among them are representatives of countries recently at war with each other—and with us.

Fortunately, national and racial enmities seldom get down to the individual level and the human impulse for fraternization is very strong. And in their humanitarian purposes they have a powerful bond of common interest.

One of the great tragedies of these times is that millions of men of good will, prisoners behind the Iron Curtain, are prevented from joining those of the free nations in serving mankind.

★ ★ ★

6 STEPS AHEAD

By NED H. DEARBORN

President, National Safety Council

IT IS time for plain talk. You and your fellow Americans have been warned time and again against accidents. You have been politely advised what to do to prevent them. Hundreds of organizations have waged persistent programs of action to help you help yourselves.

Thousands of news stories, special feature articles, editorials, and cartoons have for years told the stark tragedy of human waste and economic loss. Millions have heard the safety doctrine by way of radio, television, and motion pictures. All other media of public education are contributing generously of their space and time to your welfare.

The best that can be said is that the over-all accident rate has been reduced and that the results would be too horrible to contemplate if these widespread and continuing efforts had not been made. We still kill and maim young and old until any decent-minded and thoughtful person must be sickened and shocked beyond words. I'm sickened and shocked, but not yet beyond words.

You have been advised that cooperation must be the basic method used in this important area of human, economic, and national welfare. Oh, yes, I can truthfully compliment many of you on the gains made in cooperation during recent years. Gratifying as the gains are, we are capable of much greater gains.

But this is not a report of progress. That kind of a report has been made so often that it has currently the effect of a bromide. This is a report on the *gaps* in our program of cooperation. Those who believe in and strive for cooperation will not take offense at what I shall say. Those whose personal or institutional selfishness keeps them from cooperation may not enjoy this report. But I'm tired of being polite to those within and without the Council family who impede cooperation and thus contribute to our ghastly national accident record.

In my simplest English I will spell out the six steps in cooperation. And I shall draw heavily upon my own experience to point out the gaps in our program. The six steps are:

1. Establishment of the machinery for cooperation.
2. Start of the machinery.
3. Proper use of the machinery.
4. Belief in each other.
5. Support for one another—financial and moral.
6. Constant hard work toward full cooperation.

Step 1—Machinery for Cooperation

In 1947 we voted to revise our Constitution and By-Laws enabling us to set up Conferences in the several fields of accident prevention. Choice of membership in a conference is your own prerogative. Each Conference is composed of representatives from leading public and private agencies. Each Conference has it in its power to be the National Safety Council in its special field—to be a Council in the best and truest sense of the

EDITOR'S NOTE: *This article has been condensed slightly from President Dearborn's address before the Annual Council Meeting, 39th National Safety Congress, October 8, 1951.*

word. The Conference is the mechanism through which cooperation can be realized.

The first step was to obtain Conference members. We were elated by the response. Among the scores invited, only two agencies declined. These two agencies were afraid they would lose their identity, their prerogatives. They were afraid that this octopus, the National Safety Council, would swallow them. The irony is that Conference membership is a chance to cooperate with sister agencies in safety to their mutual advantage.

The Conference system precludes the possibility that the National Safety Council staff may run the show. Only the secretary of the Conference is a staff member, and if he does more than advise at times and tend to the chores, it can be charged to the Conference members. The Conference takes the National Safety Council out of competition and makes it only one of many cooperating agencies. Thus, the machinery is established and ready for the mutual benefit of all agencies.

Step 2—Starting the Machinery

After the Conference is established, a Conference meeting is scheduled. The day arrives, and so do most of the Conference members. So far the net effect is discouraging. One gets the impression that a few members are skeptical of the motives of the National Safety Council in calling them together. What are these dubious characters on the staff up to? Are they reaching out for more power? Are they trying to control safety in this free country of ours?

More irony. Conference members are, with few exceptions, already members of the National Safety Council. So these skeptics in reality are doubting themselves—unless they entertain the paradoxical notion that their own hired hands are incompetent or untrustworthy. Then their attitude toward each other is also perplexing. It seems they not only are skeptical about the motives of the National Safety Council, but suspicious of each others' motives. This would be amusing were it not for the devastating results on the main job of the Conference—to bring about cooperative action.

The next Conference phenomenon is really something to watch. Each member reports what his agency is doing in accident prevention. With no intention, I'm sure, of being untruthful, the tale loses nothing in the telling. After one such meeting a member who had been silent said to me, "We might as well go home and quit worrying. These folks are doing everything that can be done! There just can't be anything more to do!"

Sardonic humor and more irony! All that is being done is not enough. The aggregate effort may sound impressive. But separate efforts without unity, without cooperation, are wasteful of time, money, and effort, and can even be downright harmful. We must rise above ourselves, if necessary, in this great humanitarian effort.

Step 3—Proper Use of the Machinery

We have appeared before each Conference and tried to explain our policy of cooperation and what cooperation in action programs actually means. We have said each organization's opportunities and privileges are threefold in character. First, the Conference should determine the size and seriousness of its problem. Secondly, through further discussion, it should reach the best decisions possible as to the several practical solutions to its problem. And lastly, the Conference members should agree among themselves what should be done, and what agency or agencies can best do what.

We further stated that our staff would no longer decide by itself what activities or publications the staff would perform or produce. Each Conference would do that. We said that we hoped our staff members would present worthwhile, practical ideas, but that the Conference would decide whether our staff members conducted their own suggested programs or whether some other agency or agencies could conduct them more effectively, or even whether the suggested programs should be postponed or dropped.

So far as the National Safety Council is concerned, there are only two limitations on this procedure: (1) Our available funds to do what each Conference decides the staff should do, and (2) our general policy entitled "Safety

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Hoisting the Green Cross for Safety flag at the Argonne site. The flag flies as long as the safety record remains unbroken. At the left is F. R. Clement, project personnel director for The Austin Company. At right is Robert H. Klett, security and safety coordinator for the Special Construction Account, administered by the University of Chicago.

Planning the Work

. . . and Working the Plan

By A. L. FRITZ

ONE OF THE major construction safety achievements of 1950 was recorded at the Atomic Energy Commission's Argonne National Laboratory, 26 miles southwest of Chicago.

The accomplishments for the 12-month period won for the builders, The Austin Company, a special plaque for meritorious achievement from the Atomic Energy Commission in its major construction classification. Achievements included:

153 working days — 1,180,000 man-hours—worked by an average of 1,500 employees without a disabling injury.

14 disabling injuries in a total of 2,712,000 man-hours for a frequency rate of only 5.09.

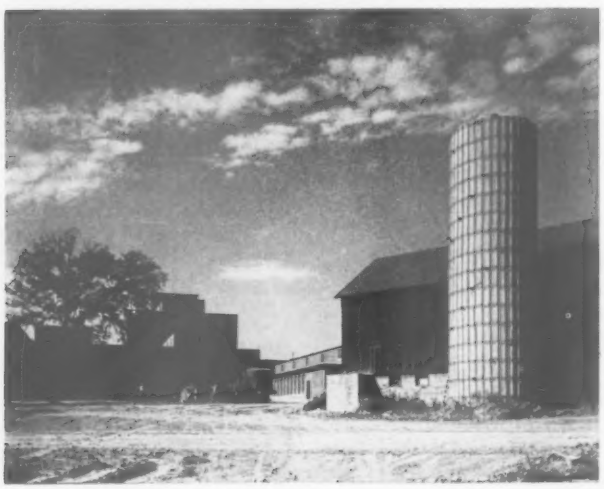
Three years of construction work on this project have been completed without a fatality.

The formula, if it may be called that, consisted simply of "planning the work and working the plan" safety-wise. Developed for the job at hand, the program included many interesting features. Of these, a large proportion represented lessons learned by the Austin organization in more than 40 years' experience.

Before actual construction started back in 1948, a special safety department had been organized and staffed by the builders specifically for this project. It provided a safety engineer, project doctor, registered nurse, clerk and assistant engineers, as needed in terms of the number of employees.

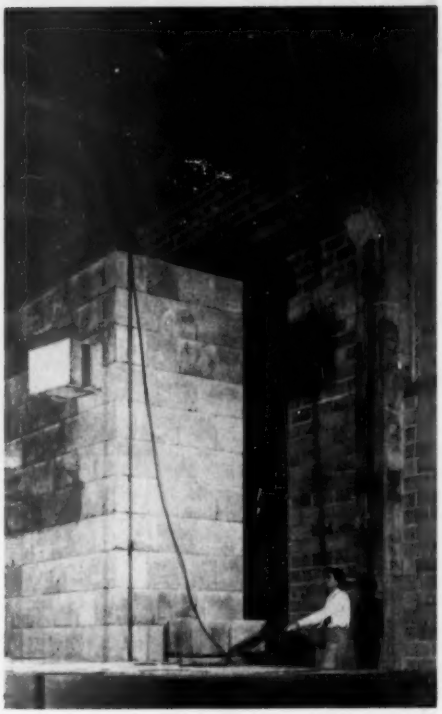
The safety engineer reported to

The new and the old. The Chemical Engineering Building, one of several permanent laboratory buildings at Argonne National Laboratory rises 80 feet above and extends 40 feet below the ground level. The barn and silo have since been removed.



A. L. FRITZ *is Project Safety Engineer for The Austin Company at Argonne National Laboratory.*

A slogan plus the score of accident-free days is displayed conspicuously on these boards.



Concrete blocks made on the site were used in the erection of nuclear research cells in the Chemical Engineering Building. Keyways in individual blocks permit insertion of 3-inch square steel core and insure precision fit vertically. Lead strips ½-inch thick and 2 inches wide are placed along inside and outside of each layer to seal horizontal joints. Three-ton crane handling concrete block is operated by push-button from floor.

the project manager and directed the work of all departmental employees. His duties included constant inspection of all work in progress at least once a day, or more often whenever possible; maintenance of first-aid station, and immediate investigation of all serious accidents, whether or not they involved lost time.

Backing up this basic organization was a second line of safety defense. It was a top-executive safety committee of five key men: the project manager, general superintendent, safety engineer and two representatives from the safety department of the controlling contractor, The University of Chicago.

Then, to follow through with workers on the spot in carrying out the ideas developed and refined by the safety department and the executive safety committee, special "safety co-ordinators" were named to serve each of more than a dozen different buildings under construction and other areas of activity. These men included clerks, labor foremen and assistant superintendent, all of whom thus functioned as liaison officers for safety.

On most projects, Austin looks to its superintendents for results. As the company's general manager on the site, he is the individual who ordinarily organizes the job for safety—lines up the construction equipment, plots the work schedule, determines the construc-

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Austin Company staff at Argonne project. Left to right: Matthew Lewicki, safety engineer; Miss Mae Gregorich, R.N.; Dr. R. Glazer; Wm. Archibald, ambulance driver.

NEW AND FAMILIAR FACES are found each year in the line-up at the registration desks. This was the scene on Monday morning at The Stevens.

"Close Gaps in Cooperation!"

Dearborn Urges 39th Safety Congress

THE NATION'S accident toll, Fire Prevention Week, and the problems of civil defense were very much in the public mind while the 39th National Safety Congress was meeting in Chicago. And these related subjects received close attention in the general and subject sessions of the Congress and in the more specialized meetings of the 31 sections of the National Safety Council.

It was in no spirit of complacency that more than 12,000 leaders in safety, from all sections of the U. S. A. and from Alaska, Canada and several European countries, met to share knowledge and plan campaigns. The over-all accident picture, in spite of splendid individual records, is still appalling, and the best efforts to date have not been good enough.

It was this side of the picture that President Dearborn stressed in his keynote address at the Annual Council Meeting Monday morning. He warned the Council membership against feeling any satisfaction in how much worse the situation would have been without organized safety effort. Progress reports too often have the effect of a bromide.

The growth of the National Safety Council and of the National Safety Congresses are splendid examples of cooperation. The press, radio, TV, and other media are placing their facilities most generously at the disposal of the safety movement. Yet there are serious gaps in our program of cooperation which are hampering progress.

Mr. Dearborn denounced those whose personal or institutional selfishness had kept them from participation, and the apathetic public officials who were not doing their duty. He described the structure of the Industrial Conference as an example of a medium for cooperation in which other organizations can join without losing their identity—one in which the National Safety Council is only one of several organizations participating.

Mr. Dearborn's address, "Six Steps Ahead," with postscripts not

Ned H. Dearborn again heads National Safety Council. A complete list of Officers, Trustees and Directors elected at the Congress will be found on page 40.

* * *

LOOKING AHEAD . . . The 40th National Safety Congress and Exposition will be held in Chicago October 20-24, 1952.

LEFT: Inquiring delegates get information about Council services at the Congress Hotel exhibit. RIGHT: The Congress as it looked from behind the registration desk at The Stevens.

TIME FOR PLAIN TALK. President Dearborn warns members at the Annual Meeting of the gaps in the Council's program of cooperation that are hampering safety's progress.

presented at the Annual Meeting, is published in this issue.

"Civil defense is national safety," declared Millard Caldwell, Federal Civil Defense Administrator, who outlined the problem and stated that a well-organized program could cut the toll of hostile aerial attacks approximately 50 per cent.

"Sportsmanship in Safety," was interpreted by Lieutenant Commander Helen Hull Jacobs, tennis star, author, and now engaged in public relations work with the United States Navy. Her address was based on a wide experience in sport and in motoring.

As delegates were leaving the Annual Meeting, a demonstration of civil defense measures was being held along the Chicago River. On the north bank smoke bombs created the effect of a conflagration while on the opposite bank firemen were pumping a solid wall of water six stories high to keep "flames" out of the loop. While bombers roared overhead a destroyer and four smaller patrol craft elevated their guns and went through the motions of sweeping the skies with ack-ack.

A block away another crowd had assembled by the Tribune

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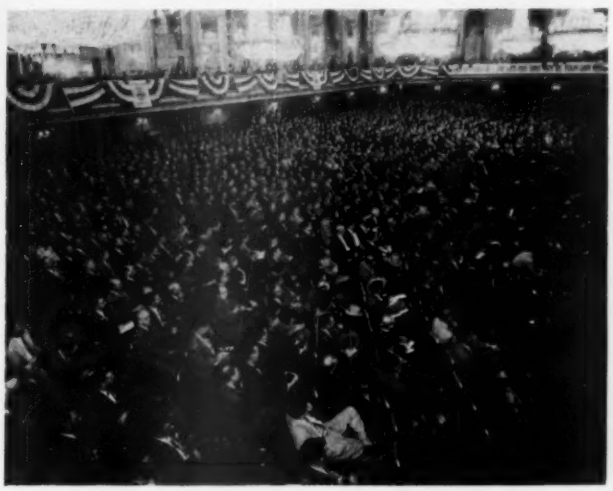

STARTING the Congress day. For four mornings Dr. Irving J. Lee of Northwestern University's School of Speech filled the grand ballroom of The Stevens for the Early Morning Sessions. "Human Understanding—a Two-Way Communication" was the theme of this year's lectures on public speaking.

Tests for Safety Clothing

By JOHN A. DICKINSON

Now and more effective types of fire-protective clothing have been developed to meet the extreme requirements of fire-fighting and rescue work in airplane crash fires. (Official U. S. Navy photo)

BASICALLY all clothing is protective. The cave man wrapped the skins of animals killed for food about his body to protect his skin from thorns and branches. A flap of tough hide tied to the sole of his foot enabled him to travel in comfort over rough ground and to climb rocky heights in search of elusive wild sheep, goats and similar animals that made their home on the mountain slopes.

Today we restrict the term "protective clothing" to articles of wear which protect against hazards of occupation.

Footwear

Probably the commonest type of protective footwear is the steel-toed industrial shoe which gives protection against most objects which might be dropped on the feet and provides protection against crushing of the toes when run over by hand trucks or small power-operated units. The present steel-toed shoe will safely sustain a load of 2,500 pounds.

Now just what is meant by "safely sustain?" Any metallic object subjected to load yields a certain amount, dependent upon the shape, size and distance between supports, and the material of which it is made.

This can best be exemplified by a freight car axle set up as a permanent exhibit at the National Bureau of Standards. It is about five inches in diameter and is carried on "V" knife edges, approximately three feet apart. It will safely carry one quarter of the weight of a loaded freight car—let's call it 100,000 pounds, yet this bar of steel, which carries a working load of 25,000 pounds, can be "bent" by pressing on it gently with the thumb or finger. True, the bending is measured in ten-millionths of inches by means of the interference pattern of light from a monochromatic source, but it is bent.

How much can we bend or deform this steel cap in a safety shoe without injury to the toes? A series of tests showed that so long as there was a space of 3/8 inch between the sole of the shoe and edge of the steel cap, little or no damage would result. With such performance requirements set up, it is a simple matter to put the toe of a shoe in a testing machine and load it to 2,500 pounds measuring the clearance between the sole of the shoe and the edge of the steel cap. Or perhaps if you are using an alloy steel which is more resistant to deformation than carbon steels, you can run the load up until the clearance is the minimum specified. This will tell you what loading the man in the plant can be protected against with the shoes actually provided.

One question debated extensively in the Sectional Committee which worked up these standards was the effect of impact; would a shoe that would safely stand a given static load (represented perhaps by a casting "inched" down by a crane operator on a man's toes) stand the impact of a weight falling an appreciable distance? For example, a tool worker while removing an 80-pound blanking die from a punch press lets it slip from his grease covered hands and fall on one of his shoes; will he be protected? While the energy in foot pounds of the falling load is known, it is difficult to compute the manner in which this energy is absorbed by the steel cap. Much remains to be done in evaluating such impact loads.

In many chemical plants, especially those using strong mineral acids, wooden shoes are used; sometimes treated with paraffin to prevent absorption of acid by the

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JOHN A. DICKINSON *is Head, Safety Codes Group, National Bureau of Standards, Department of Commerce, Washington, D. C. This article was presented at the Twenty-first Annual Safety Convention of the Greater New York Safety Council, April 1951.*

wood. How could the relative value of such shoes by checked? One method would be to place the shoe in a glass or china vessel with a thin film of acid of the strength used in the plant, placing litmus paper or some other indicator inside the shoe, checking periodically to determine the number of days or weeks that are required for acid to work through to the inner surface of the shoe.

Since there is appreciable wear when such shoes are worn on concrete or tile floors, it might be well to sand the sole of the wooden shoe until at least half of the thickness was lost and then repeat the test. A comparison of the results of such a test with the test of an unworn shoe would give a fair idea of the depth of penetration of the water-proofing treatment.

Protective Garments

"Fire proof" clothing of asbestos or spun glass is used quite widely in industry, generally where great heat must be encountered for various periods. Such clothing may be evaluated by providing known temperatures on the outside of the fabric or garment and measuring the time required to reach a limiting temperature on the inner side. Such methods are used extensively in measuring the insulating value of building materials, fabrics, insulators, etc.

It may be that a fire-protective suit which would be satisfactory for some industrial operators would not be satisfactory for other uses, as for example, fighting fire and rescuing passengers from a plane which had crashed. Suits of asbestos or spun glass with an exterior coating of aluminum foil have recently come into use for fighting fires of this type.

To be effective, clothing to protect men doing sandblasting must keep out most of the abrasive dust. Such clothing or material may be tested by blowing some of the finer dust against it, using the sample as one side of a metal box into which the test material is blown.

A similar test could be made of materials used in "wind breaker" jackets or vests used by men who must work out of doors under conditions of low temperature and high winds. The U.S. Corps of Engineers and the Quartermasters Corps have made extensive tests of special clothing at Fort Belvoir and other test centers. Some of their methods might be of value in testing protective clothing.

High-Voltage Equipment

Rubber gloves and arm protectors, as well as rubber blankets and "pigs" are standard equipment for almost all power and communication linesmen. Tests with standard potentials for specified time intervals have been available for many years, and almost all public utilities test such equipment periodically. There is however, a wide diversity of practice in the utilization of such equipment. Some companies use a pair of gloves which have passed a 6,000-volt test up to the test voltage while others limit their use to 40 or 50 per cent of the test voltage.

Hard Hats

Hard-hats are used in dozens of industries ranging from mining to shipbuilding, and from steel erection to logging. They are a carry-over from the stiff derby hats which bricklayers found would afford protection against a falling brick. Probably most of you are too young to remember it but I have seen a dozen bricklayers working on a job all wearing derby hats for the protection they afforded. The present code requirements include a drop test of an eight pound ball falling four feet. This impact must not cause the hard shell to touch the wooden head form upon which the webbing-support is mounted.

For certain industries such as shipbuilding, there is a feeling that greater strength should be required, since a tool may fall 50

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Safety Council Aids Clean-Up Drive

COOPERATING with the Clean Up - Paint Up - Fix Up campaign, the Louisville, Ky., Safety Council furnished poster boards to publicize the campaign. Louisville won second place in the National "Cleanest Town" contest among cities of 100,000 to 500,000 population in 1948, 1949 and 1950.

SPORTSMANSHIP — plenty on the tennis courts; why not more on highways, asks Lt. Commander Helen Hull Jacobs.

INTERNATIONAL GROUP. Gunnar Hultman, of Stockholm (seated second from right), with Mr. and Mrs. Russ Davis on Russ Davis Show, WGN-TV. In group are ECA representatives from Germany, Austria, Holland and Ireland.

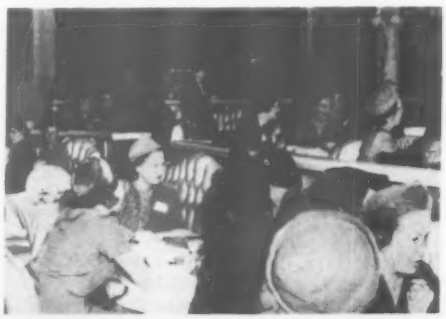
—From page 23

Tower to watch the World's Series game on TV.

* * *

Participation of the federal government in the Congress was again evident. Monday afternoon the Sixth Annual Federal Safety Conference was held, in addition to meetings throughout the week of the Air Force, the Army and the Navy, with a total attendance of several hundred. Representatives of many government agencies and the armed forces also took part in many of the other sessions of the Congress.

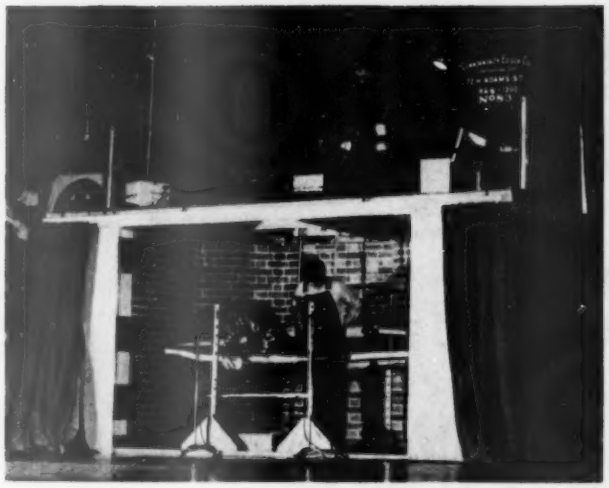
Many industries, particularly those with widely scattered operations, also took advantage of Congress Week to hold company safety conferences. Among those reported to the Council were: American Car & Foundry Company, Bethlehem Steel Company, Kimberly Clark Company, Peoples Gas Light and Coke Company, Swift



NO MAN'S LAND. Ladies attending the Congress are entertained at a reception at the Blackstone Hotel.

WHY CAN'T WE SELL SAFETY? Paul Jones (seated) discusses that problem over CBS. (Lower right.) Standing at the mike is Ed Scott, WBBM staff announcer.

MRS. ROBERT YOUNG takes a bow at the Banquet. Seated, left to right, are: Dr. Herold C. Hunt, Wallace B. Phillips, Kenneth B. Colman, and Tyler S. Rogers.



MRS GEORGE W. JAQUA receives certificate of appreciation for her services as NSC vice-president for Women's activities from Ned H. Dearborn.

UNDER FIELD CONDITIONS. Crew from Commonwealth Edison Company demonstrates value of job planning and job briefing in safe performance of work.

& Company, Union Carbide and Carbon Corp., Reynolds Metal Company, and Brewers Foundation.

* * *

The Navy figured prominently at the Annual Meeting of the American Society of Safety Engineers. On the program were Rear Admiral Paul B. Nibecker, USN, whose topic was "Safety—Your Job or Mine?" and Lieut. Allen W. Kenney, USN, safety officer for the Navy's Medical Department, who spoke on the effects of atomic weapons.

Capt. Winnie Gibson, director of the Navy Nurse Corps, was the speaker at the luncheon meeting of the Industrial Nursing Section.

The Congress on the Air

With the cooperation of sponsors of radio programs, radio and television stations and networks, and news commentators throughout the nation, the radio coverage of the National Safety Congress was more comprehensive than at any other time in history.

Thirty-two radio network shows featured the 39th Congress in one way or another. Participants in Congress programs were featured on 26 local radio programs and 230 of the nation's radio commentators reported special tributes to the Congress. Seven television net-

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MILLARD CALDWELL, Federal Civil Defense Administrator, appears with Mr. and Mrs. Russ Davis on WGN-TV. In background is Cosmo Genovese, director of the Russ Davis Show.

ROBERT YOUNG, radio and motion picture star and the Banquet speaker, with Mrs. Young and Mr. and Mrs. Dearborn.

Congress Loot

(Fiction)

By BILL ANDREWS

October 12, 1951

I AM NOT BY NATURE a collector of souvenirs. I am certainly highly selective in my choice of brochures to bring back from an exhibit. Nonetheless, it is a standing joke between Sue and myself that the rite of unpacking my suitcases after a National Safety Congress and Exposition is a laborious and entertaining one.

On top of the pile of dirty shirts and socks stood the two little gift packages—the new blocks for Junior and the handbag for Sue, both hastily bought in a last-minute, conscience-stricken shopping spurt on State Street Friday afternoon.

Completely enveloped in underwear was a pair of plastic goggles, the Green Cross playing cards which I got as favors at the Congress banquet, a sample of reflectorized cloth and a small unitized first aid kit.

These were, with the exception of the playing cards, loot from the Exposition. The goggles came from a very eager young salesman at one of the optical company booths who was most apologetic because the salesman of his company who calls on me wasn't available at the moment. I got a thorough going over on the virtues of eye protection at a level that makes me suspect the young man had thoroughly read the first half of his outfit's sales manual but not the second half.

I confess to have taken a certain joy in being propagandized on this subject after all my years of being the propagandist. He was such a well-intentioned young man and so much in love with his subject that I didn't have the heart to tell him I knew his line better than he did. Instead, I thanked him profusely for the goggles and assured him that I loved his company like a brother.

The reflectorized cloth is a little more important. The salesman claimed it reflects light at a broader angle than other types, and, though his demonstration in the booth was quite plausible, I want to try it under plant conditions.

The first aid kit is the product of an argument. It had started on

the floor of one of the meetings of my own section, continued at an exhibitor's booth, and reached its climax late the same night in the exhibitor's suite.

The paper that produced the argument was all right—it discussed the need for good centralized first aid facilities. Stock stuff, but sound. Then Dean Lerston from Maxwell-Carpenter got up and made quite an argument for broader first-aid training and departmental first-aid setups. I felt called upon to rebut what seemed to me Dean's overemphasis on the latter point, and said some unkind words about departmental kits as repositories for patent medicines, yesterday's lunch and most unsterile roller bandages.

On my way out Raysmith collared me. He makes a good unitized kit, and I've bought a few from him for use on trucks and in our Wisconsin logging operation. He claimed my argument was sound, but inadequate, because I discussed departmental kits as if they were the old-style, bulk goods type.

We narrowed the thing down, so that, by the time our argument was in competition with the card game in Raysmith's suite that night, I had agreed that outlying installations could use kits, and he had agreed that departments next door to a centralized first-aid setup couldn't. That left us plenty of room to wrangle, and we made quite a thing of it. Finally, Raysmith produced the kit and said, "You're a stubborn mule, but you do this for me. You take this kit home with you. Keep it on your desk. Watch your main plant first aid cases for a few weeks. I'm betting that you'll find, among those cases, some from departments where a kit like that would have speeded treatment, maybe would have encouraged treatment in cases which a guy might let go if he had a long trek to the first-aid room. And remember, darn you, that there's no room in it for yesterday's lunch and it has no unsterile bandage!"

So that's something else to think about. Raysmith's a most persuasive guy.

While I was discussing these points with Sue, Junior rummaged deeper in the suitcase. He had passed the underwear stratum and was in the necktie and rumpled suit region when he announced joyously, "Te'y Bear!"

He hugged its wooly body to him affectionately, and I wondered whether Teddy would ever be freed to serve the function I planned for him.

A bunch of us had dined together Tuesday night at a restaurant on the edge of town. We were all tired enough to be feeling a little silly, and next door to the restaurant was a vacant lot temporarily occupied by a carnival. So we did the carnival. We inspected the ferris wheel in all solemnity and assured the suspicious operator that we gave it the formal approval of our nation's safety engineering profession in congress assembled. In earnest of our approval we all rode the contrivance, leaving the cars well plastered with assorted safety decals which had little relevance to ferris wheel operation.

Inevitably, we wound up playing the games that were offered at various booths. I wound up with Delano in front of a booth which had a pyramid of three imitation milk bottles—two on the base and one on top, the game being to knock them all down with one ball.

Delano, who used to pitch semi-pro ball, undertook to demonstrate that he still had his old skill. The bottles were, of course, heavily weighted on the bottoms, and he was unsuccessful in knocking them all down.

the LIGHTER SIDE
NO SIR! NO FLYING FOR ME— IT AIN'T SAFE!
"AND ANOTHER THING - NO CHRISTMAS PARTY THIS YEAR. I DON'T WANT TO SEE YOU COME HOME LOADED."
CAREFUL, STUPID! IT MIGHT BE LOADED!

As he gave up in disgust, I noticed that the booth attendant rebuilt the pyramid carelessly,

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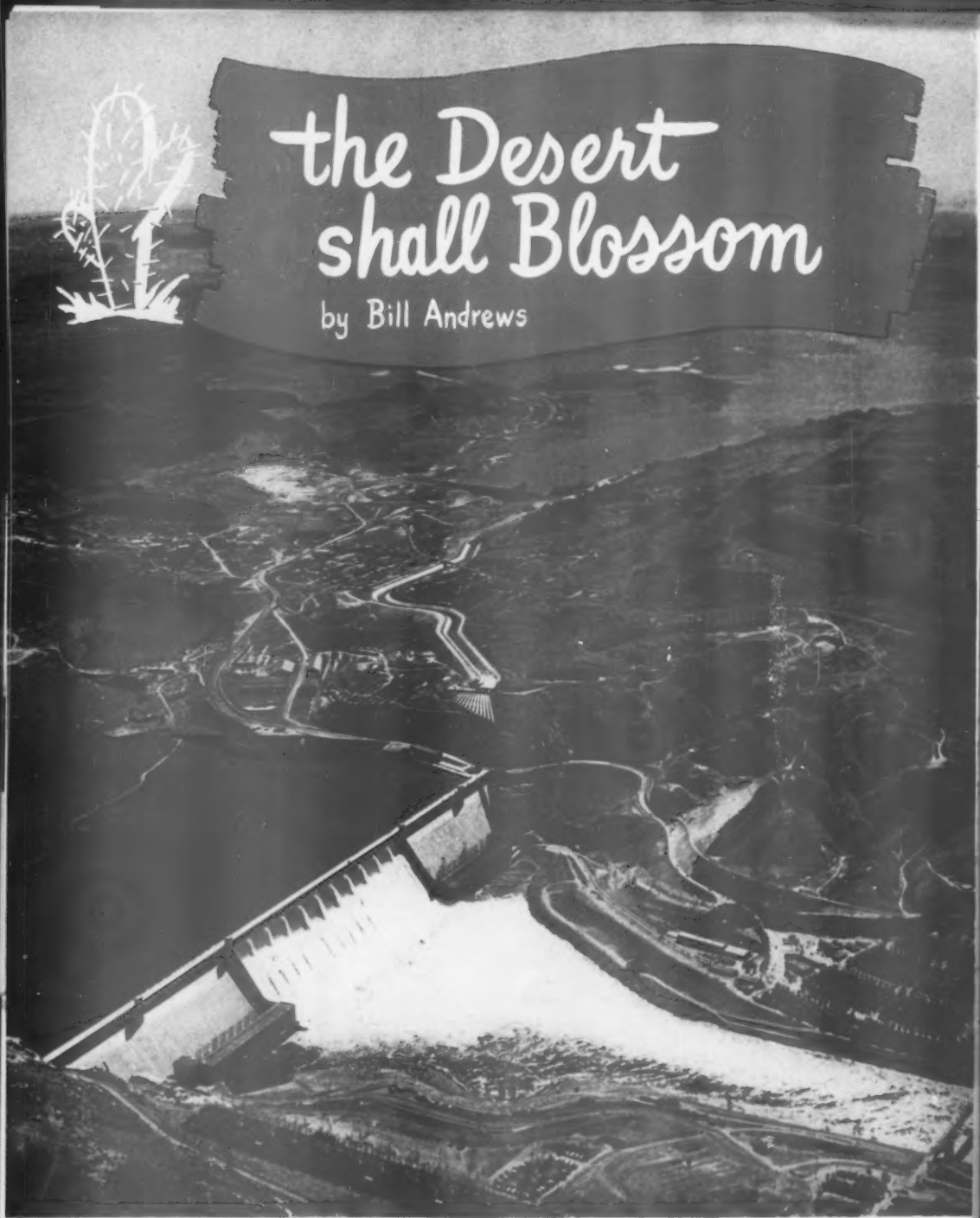
the Desert shall Blossom

by Bill Andrews



AERIAL view of Grand Coulee Dam, pumping plant, feeder canal and part of the equalizing reservoir. Powerhouses flank the spillway. Above the far end of the dam are the 12 pipes through which the water for irrigation is pumped into the feeder canal—a 280 foot lift. Water then follows old bed of the Columbia down Grand Coulee.

By **BILL ANDREWS**

(A National Safety News *Field Report*)

The desert shall rejoice and blossom as the rose. It shall blossom abundantly, and rejoice even with joy and singing . . . For in the wilderness shall waters break out, and streams in the desert. And the parched ground shall become a pool, and the thirsty land springs of water. . .

Isaiah

A PHASE of the Grand Coulee story is already finished. The dam—largest concrete structure in the world—is in place. Most of the generators in the two power houses are droning steadily, rolling out kilowatts. Many of the smaller dams and miles of irrigation canals have been built. The railroad that supported the great construction push on Grand Coulee dam is gone, and the first pumps are lifting water from the Columbia out of its present bed and into its old course, Grand Coulee.

I stood this summer, with Harold Wersen, district safety engineer for the Bureau of Reclamation, watching the water spilling out of the pipes at the head of the Coulee and roaring down the feeder canal on its way to South Dam where a spreading pool is becoming a lake which eventually will fill the north end of the Coulee.

Beyond South Dam, the canals that form a network across the desert are still dry, the siphons are empty tunnels where the spoken word echoes and re-echoes. But next year the lake above South Dam will start to feed these canals, the siphons will suck the water across the valleys, and the little local channels will carry the water to thousands of acres of desert land.

It is symbolic of the change in emphasis of the work of the Columbia Basin Project that Harold Wersen's own headquarters have recently been shifted from the dam site to Ephrata, far down the

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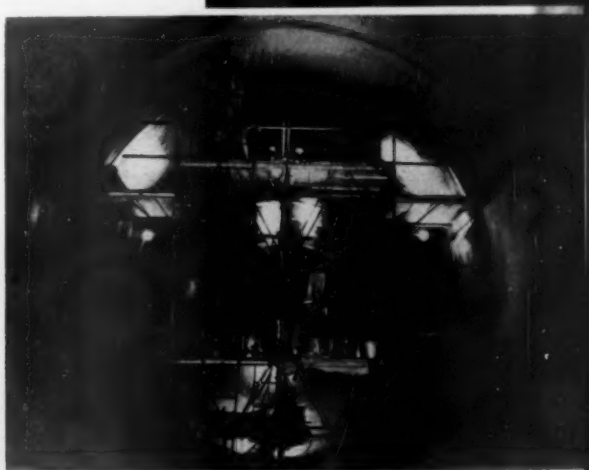
LEFT: Installing scrollcase of a 108,000 kw generator at Grand Coulee Dam. Note the hard hats and well-designed access walkways and stairs. Scrollcase carries water to 150,000 hp turbine of generator.

BELOW: Spider staging used in a Grand Coulee powerhouse generator gallery. The rig consists of two separately powered lifts with a bridge connecting them to form a scaffold. Using this rig, six painters did a job in 4½ months that would have taken 16 painters 11 months if they had used ordinary swing staging with blocks and falls.



ABOVE: Rolling paint scaffold in use on 25-foot siphon carrying irrigation water 2½ miles across Coulee. Welded steel lining was sandblasted, coated with coal tar enamel. Man at top wears air hood, man below a respirator. Black arch in background is canvas shield of grit blasting machine.

LEFT: Race against time was won with help of this jumbo used on cut and cover section of feeder canal. Slipping clay required pouring of pipes immediately after excavation and a quick replacement of excavated material. This rush job was completed without a single injury to any of crew.

DATA SHEET D-PP-14

PAPER MACHINES

Published by National Safety Council
425 North Michigan Avenue, Chicago

1. In the pulp and paper industry, the department which makes paper and paperboard (commonly referred to as the machine room) has both a high accident frequency rate and a high severity rate. In 1949 its 20.97 frequency rate was exceeded only by that of the wood yard. Only the wood cooking, coating, and general mechanical departments had a higher severity rate than the 2.10 of the machine room.

2. Since the operations in paper making have a high accident potential, they merit considerable attention in the continuing effort to achieve a safer industry.

3. This data sheet will consider the accident problems associated with making paper rather than the hazards associated with one specific machine. The operations of the paper (Fourdrinier, Yankee, Cylinder) machine will be considered under the following categories: wet end, dryers, calender stacks, reels, and winders. Since each of these operations has its particular hazards, they are dealt with separately.

This Data Sheet is one of a series published by National Safety Council. It is a compilation of experience from many sources. It should not be assumed that it includes every acceptable procedure in its field. It must not be confused with American Standard Safety codes; federal laws; insurance requirements; state laws, rules and regulations, and municipal ordinances. Reprints of Data Sheets are available from the National Safety Council.

Wet End

4. The floor and footboards at the wet end (Figure 2) of a paper machine are likely to be slippery, especially during wash-ups. Therefore, it is recommended that footboards, catwalks, individual steps, and stairs be surfaced with abrasive material to insure a good footing.

5. Because loose abrasive material could get into paper being processed and cause damage, an

Figure 1. Modern paper machine. Note walk and stair ways with no hand rails.

Figure 2. Wet end of a Fourdrinier showing, left to right, head box, wire, suction box and dandy roll, and suction couch.

Figure 3. Dryer section of modern paper machine.

Figure 4. Dry end of paper machine.

abrasive surface that will not crumble should be used. This precaution is especially necessary on the footboards across the wire. The abrasive selected should allow some "slide," and not tend to freeze shoes to the surface. One company reports satisfaction with a walkway made of galvanized grating covered with non-skid paint.

6. Footboards, stairs, and steps should be provided with handrails (see Figure 1: note lack of handrails on catwalk). Footboards and running boards should have a toe board and be made as rigid as possible.

7. Oil and grease should be kept off the floor; if the floor is wet, the slipping hazard is increased considerably. Leaky bearings and careless oiling cause most oil and grease spills.

8. Slime growth on concrete can be removed with muriatic acid. Commercial cleaners are reported to do a suitable job of removing slime growth.

9. Soaps and chemicals used as cleaning agents during felt washups contribute to the slipping hazard. To reduce splashing, some companies use hoses to apply cleaning agents to the felts. One company keeps cleaning solution in an elevated barrel from which it is sprayed on the felt through a shower head. Another firm uses an ordinary sprinkling can (garden type) for this operation.

10. When using acid to "sour" a wire or remove pitch spots, the worker should wear rubber gloves, an apron, and a face shield over rubber cup goggles. All workers using chemical should be similarly protected. (Acid should be diluted by adding it to water—never water to acid.)

Handling Felts

11. Whenever possible, presses should be stopped before turning felts. The job can be done just as quickly with the presses stopped as with the presses moving. It's easier and safer for the men. During this situation one of the machine crew should be stationed at the controls to start and stop the machine as directed by the men handling the felt.

12. While felts are being washed and turned, extreme caution must be taken to keep arms and hands from being caught between the felts and the felt rollers.

13. Many paper mills, aware of the hazard that comes with reaching for the felt at the point where it goes on the carrying roll, require workers to pull felt only on the side of the machine away from the inrunning nip. For this reason footboards, platforms, and other working surfaces are located to make this possible. It is widely believed that mechanical guards cannot be provided at this point

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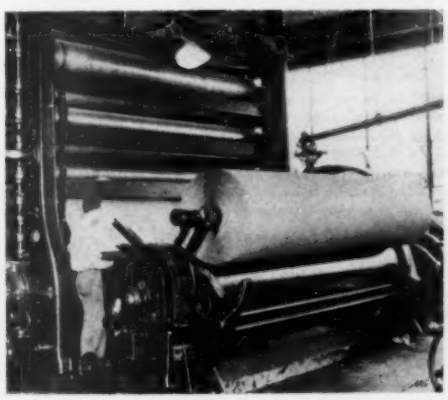

Figure 5. Calender stack and reel.

HOW TO PREPARE

Part II—Producing the Manual

By J. E. APPEL

MANUAL at top has die cut pages for index, simple clamp binding, serves a single department. Company-wide manual below has post binding (not shown), tabbed dividers for index, and a detachable first sheet on which employee agrees to study the manual.

J. E. APPEL is Supervisor of Safety, Commonwealth Edison Company, Chicago, and a member of the Executive Committee of the Public Utilities Section, National Safety Council. This article was prepared as a project of the Section's Training Committee. Part I, "Writing the Manual," appeared in the October issue.

ONCE the text of a safety manual has been decided on, the next problem to consider is the physical appearance of the publication. How simple or how elaborate a manual will obviously be determined by the funds available. No matter what the expense, however, numerous technical factors enter the problem. Since few people outside the publication field are familiar with these items, it is wise to lean heavily on the advice of experts in this profession. The advertising department of the company should be consulted on the physical make-up of the manual.

Here are the production aspects of a manual:

1. Printing process
2. Layout and typography
3. Size
4. Type of binding
5. Type of cover
6. Kind of paper
7. Illustrations

Printing Processes

Mimeograph and Hectograph: Mimeograph and hectograph processes are seldom used for printing manuals. This is little choice as to styles of type and kinds of paper that can be used. Type faces are limited to typewriter or varitype faces. Paper is ordinarily limited to the soft nondurable kind, designed for printing on one side only. Special paper and inks must be used for illustrations.

The two processes in common use are the offset and letterpress methods.

Offset: The offset method, of which multilith and planograph are examples, is versatile. Plates are prepared by direct typing or by a photographic process which permits a combination of typed or varityped material, letterpress clippings, sketches, and photographs. Color may also be used.

For a small number of copies, the offset process offers a relatively inexpensive method of producing a high grade manual.

Regular Printing: This method is also known as letterpress printing. The printing is done on printing presses from type and engravings. It produces excellent results but is the most expensive method, unless a large quantity is printed at one time. Most general safety manuals are printed by letterpress, while departmental manuals, limited in number, are usually printed by the offset process.

Layout and Typography:

There is some controversy as to how much manuals should be "dressed up" to encourage employee reading. Well planned pages with plenty of white space, color, cartoons, and photographs increase the attractiveness of a manual, but ease of reading should be the first and most important consideration.

There are no definite rules governing layout. The advice of the advertising department of the company or of the printer should be followed. There are certain things, nevertheless, that should be considered.

Type Face: There are many type faces used for book printing which are considered equally legible. Commonly used type faces are Bookman, Bodoni, Caledonia,

A SAFETY MANUAL

Bodoni Book, Garamond, Scotch, Schoolbook, Textype, Caslon, and similar faces. Your printer will be glad to set samples of type for you to judge.

Avoid tricky, complicated or unusual type faces. Choose a type that borders on bold face in appearance. Avoid type that is much lighter than Garamond.

Italics are useful for emphasis but should be used sparingly; readers shy away from italics. Bold face type is best for titles, headings, and important passages.

There is no marked difference in readability of sizes ranging from 8 to 12 point. Sizes outside these limits are inadvisable. Readers prefer the larger sizes.

Leading and Margins

The space between lines, known as leading to printers, has a marked effect on readability. In general, a larger size of type can be set solid, whereas smaller sizes require leading to increase readability. Twelve point type requires no leading, but for 8 or 10 point type, 1 or 2 points of leading is best. Generous margins give a pleasing appearance to the page.

Size of the Manual

The size of a manual should be determined by the use to which it will be put. If employees are expected to carry their copies in their pockets or tool kits, the manual obviously should be smaller than if it is to be kept in a desk. Your printer can suggest sizes that make for a minimum waste of paper in the cutting process.

Binders

Either a loose leaf or a permanent type of binding can be used. Many companies prefer a loose leaf style because it permits ease of revision and addition. Two types generally used are the regular ring binder and the adjustable fastener. Adjustable fasteners are the common "T" head, adjustable posts, and prong type.

Spiral, Wire-o, Circla, plastic, and other novelty bindings increase the attractiveness of a manual, but few of these types allow for additions or corrections.

If the manual is not too thick and permanent binding is desired, the saddle wire stitch, binding all the pages and the cover by 2 or 3 wire stitches, through the fold at the back, can be used. A thick manual, is stitched on the side rather than through the fold. Side stitching does not permit the pages to open easily and stay open.

Manual covers may be flush (the same size as the pages) or overhanging (slightly larger.) The latter type makes a more attractive binder and gives some protection to the sides of the pages. Some types overhang enough to accommodate tab type section headings. When using a heavy binder, the corners should be rounded to minimize "dog-earing." Many kinds of materials are available for covers. Artificial leather makes a durable binder.

Paper

There are several aspects to consider in the selection of paper. Uncoated papers such as offset or

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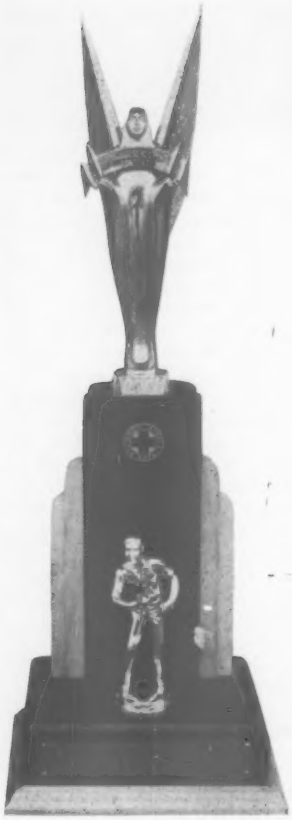
PLASTIC bound manual (Northern Indiana P.S.C.) has well-organized, easily read table of contents, particularly important in large manual.

Ring-bound departmental manual (Commonwealth Edison) shows good typography, a simple and attractive page format, and an effective use of photographic illustrations.

An Extra Janitor for the Plant

By STANLEY A. WRIGHT

This program revitalized the plant's housekeeping. The cost: Half a man's wage



The trophy awarded in Inland Division's interdepartmental housekeeping contest.

BACK in 1944 we had an accident in our plant that was the direct result of poor housekeeping. One of our employees was walking down the aisle to get a drink of water. Just as she stopped at the fountain, a lift truck came around a corner, slid in a puddle of oil, and crashed into her. She had two bones in her foot broken and lost several weeks from work.

Following this accident we started a big clean-up campaign. We used more oil absorbent in the next week than we had used in the previous two months. We knew, however, that we would soon forget this accident and that we needed something more permanent to continuously keep the housekeeping in the plant before the employees and supervision. We appointed a committee and decided to have a housekeeping contest. We divided the members of the committee into pairs and each pair graded eight or ten departments. The department which finished with the highest grade was declared the winner.

It wasn't long until we ran into a lot of trouble. We found that one of the graders was grading the winning department practically every time because of his lenient grading. He seldom gave a grade below 90, regardless of the condition of the department. This obviously made the grading unfair and resulted in criticism of the program.

Another objective was voiced by the general foreman of the maintenance department. He asked how we could possibly compare the maintenance department and its various types of work with the cafeteria, for example. Another production foreman wanted to know how any production department could compete with the medical department.

Another idea which we had at the beginning was called the "Pig Pen." This was to be a small enclosed area located in one of the storage areas where any depart-

STANLEY A. WRIGHT *is Supervisor, Safety and Housekeeping Department, Inland Manufacturing Division, General Motors Corp., Dayton, Ohio. This article has been adapted from a paper presented at the 28th Annual Midwest Safety Show of the Greater Chicago Safety Council.*

INLAND MANUFACTURING DIVISION
GENERAL MOTORS CORPORATION
Dayton, Ohio

000000

GOOD HOUSEKEEPING THEATER TICKET ORDER

This order may be exchanged for one regular admission ticket for any performance during the month indicated below at the box office of the RKO Keith's, Colonial or State Theater when signed by the employe.

Valid During Month of .....

Safety Director

Employe

Clock No.

Employees in winning departments get individual rewards in the form of two tickets good at one of three Dayton theatres for a one-month period.

ment foreman could send any equipment or material left within his department by a member of any other department. For example, if some maintenance employee did some work for the Stock Preparation Department and left some wooden blocks, a pulley, some tools, or even a ladder in this department, the supervision of the department instead of having to call maintenance to get them to get their equipment would send this material to the "Pig Pen."

This idea didn't work out so well, however, and we gave it up after we had to carry out our threat to haul anything that was left in the "Pig Pen" for more than a week to the dump. Besides, we decided there wasn't any place for a "Pig Pen" in a factory.

Over a period of years we have made numerous changes in our program. Now we have a program that really works. We know that we have much better housekeeping. At present, the program is administered by a permanent housekeeping committee of four members. As supervisor of the Safety and Housekeeping Department, I am chairman of the committee. The other three members of the committee include the chief of plant protection, the supervisor of salvage, and the supervisor of the Material Handling Section of the Production Control Department. You will note that each has housekeeping as an important part of his regular job; therefore, they are all anxious to make the program a success.

Serving with the permanent members of the committee are four temporary members who are appointed by the division head for the supervisory group. The temporary members serve for a three-month period and are rotated so that over a period of time all of the general foremen and supervisors serve on the committee. This serves to make the members of supervision feel that they have a part in the program. Frank Haley, the last general foreman who graded with me said, "Stan, I've enjoyed grading the plant this time. I've seen parts of the plant I had not seen for a long time, and I saw some departments with problems similar to mine that are doing a better job than I am. I am going to do better in the future."

For purposes of grading the committee is divided into four teams. In order to make this clear let's call these teams, team "A," team "B," team "C" and team "D." Teams "A" and "B"

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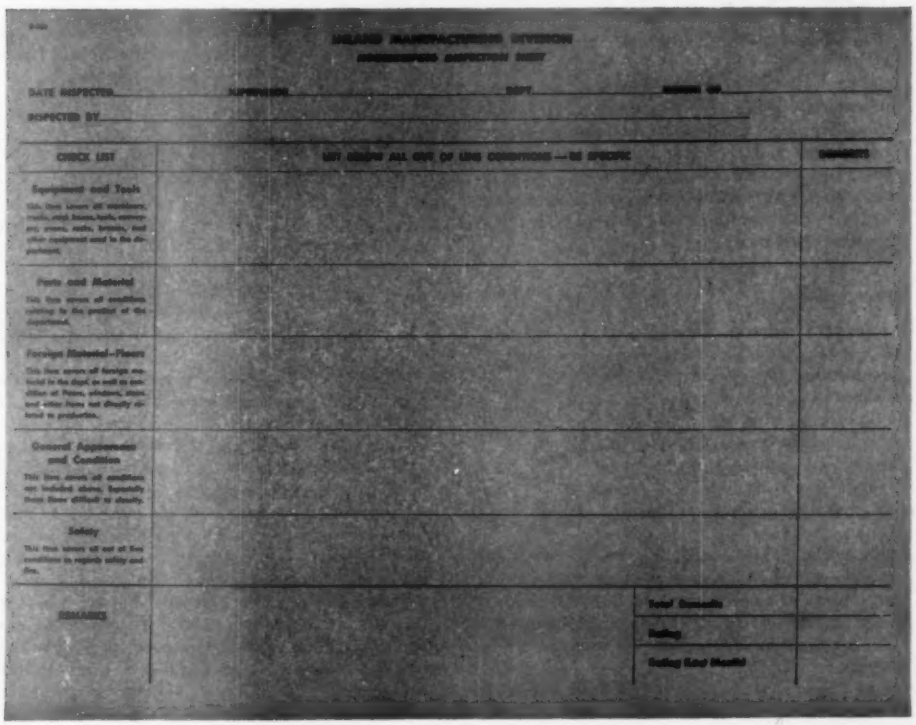
Housekeeping inspection sheet used for rating departments.



CHECK LIST	LIST BELOW ALL OUT OF LINE CONDITIONS — BE SPECIFIC	COMMENTS
Equipment and Tools		
Parts and Material		
Foreign Material—Floors		
General Appearance and Condition		
Safety		
REMARKS	Total Demerits / Rating / Rating (Last Month)	

Cause AND CURE

These examples, taken from actual cases, are presented for the use of people responsible for safety. It is believed that these, or similar cases experienced in the reader's own plant, can serve as a basis for safety discussion.

An Eyeful

An employee was engaged in opening a box of crate bottoms. He cut the bands and had folded one of them when an end slipped from his hand and struck him in the eye.

Eye accidents generally are not associated with material handling but they do occur frequently in handling wire, particularly in cutting and removing wire and steel bands used in shipping products.

Correction: All employees engaged in operations where wire bands are used should be provided with and required to wear goggles.

Sawed Off

An acetylene burner and another employee were burning through an elevated pipeline. Victim sat on pipe at one end. Fellow worker was on a ladder 40 feet away. The two men were attempting to burn through the pipe simultaneously. The 10-inch pipe was 20 feet in the air. The end of the pipe away from victim broke first, causing short section at coupling to tear loose. Victim was thrown to the ground. He incurred a brain concussion and fractured left femur, resulting in death.

Correction: Victim was following an unsafe method in sitting on the pipe he was cutting. A ladder would have kept him in a safer position. The piece of pipe being cut was not secured in any manner. Failure to secure heavy material is always an unsafe practice. There was no structure above the pipe to which to fasten a safety belt to offer further personal protection in this instance. The safest method would have been to secure both ends of the pipe and lower it intact after the burning was completed. *Study job practices* and follow up to see that it is done safely and efficiently.

Wrong Answer

A machinist, while cleaning shavings from a lathe with his bare hands, got a piece of steel embedded in his thumb.

The injured man's supervisor, in filling out the injury report, stated that the man was warned to be more careful and wear gloves when handling steel shavings. Do you agree?

Correction: We don't. Gloves should *never* be used around metal or wood-working machines. A brush should be provided to permit the operator to brush off the shavings. A glove on the hand is just as dangerous as a dangling necktie or a loose overlong sleeve. Once caught in a revolving part, it means a fracture or amputation.

How well are the supervisors in your plant informed on machine shop safety? How recently have you checked on the knowledge of all people who have occasion to use or supervise the use of such equipment?

The SAFETY VALVE

Centennials

A HUNDRED YEARS AGO even rabid stage coach fans were beginning to realize that the locomotive had come to stay.

This year several more railroads are celebrating their 100th anniversaries. They are the Illinois Central, the Erie, the Milwaukee, and the Missouri Pacific.

These roads are among those which have helped to build up railroad travel's reputation for safety. Nowadays a passenger gets on a train without a thought of the disasters like those formerly pictured in woodcuts to sell accident insurance.

And speaking of centennials, the transit industry is also celebrating the anniversary. A hundred years ago the first horse-drawn street car marked the beginning of organized, scheduled transportation. So in our congratulations we might include the people who have the tough and thankless job of providing mass transportation for our cities.

Our best wishes for another century of progress.

Signs of Progress

THE ARMY has changed since I did my stretch in World War I. When we stepped out for the evening, we were "properly dressed." That meant a wool jacket buttoned up to the neck and wrap-around puttees—regardless of temperature. If we didn't look soldierly, the MP at the camp gate chased us back. I think of that every time I see a soldier sensibly dressed in shirt-sleeves and slacks on the street.

Business is getting less regimental, too. Not so long ago store and office employees were bound by more rules than a sentry at Buckingham Palace. Sales girls were not allowed to sit, even when there wasn't a customer in sight and their feet were killing them. Men in offices wore coats, even when they didn't meet the public.

That is changing. A recent survey by the National Office Management Association, covering more than 2,000 companies, showed that only 2 per cent of the firms do not allow men to remove their coats.

Seventy-five per cent leave the choice to the employee's personal comfort; a few limit the freedom to warm weather. Some 4 per cent concern themselves with the dress of workers, but the summary in *Advertising Age* did not go into details.

Only 3 per cent forbid smoking entirely. Some permit it in private offices but not in bullpens. Some 42 per cent have a double standard which denies indulgence to women at their desks.

Time out for coffee, a.m. and p.m., apparently is here to stay. In 85 per cent of the establishments it is done with the boss's blessing. Other companies just look the other way.

The vanishing cuspidor lingers in 20 per cent of the offices. Only 1 per cent consider the utensil standard equipment; others furnish them on request.

Yes, working for a living is a lot more pleasant than it used to be.

Collector's Items

IF YOU'RE ONE of those railfans who collects dining car tableware, you may be interested in the Chesapeake & Ohio's announcement that certain items are now available FOB Cleveland. Pieces range in size and price from a demi tasse cup and saucer to a 48-ounce silver-plated coffee server.

We might suggest that the customer keep the invoice to assure guests that his hand was not quicker than the steward's eye.

In This Issue . . .

TOP BILLING this month goes to the recently concluded National Safety Congress. On page 22 and succeeding pages are some brief notes from the Congress reporter's notebook, plus a few photos from the enormous picture files of NSC's staff photographers.

Probably nobody worked harder during the Congress week and the following week than the camera boys — Cliff Benton, Wally Kenneth, Norval Burch and Jim Lehman. Their flash guns punctuated most of the sessions and they also spent many hours in the darkroom.

* * *

"Six Steps Ahead," (page 18) is the title of President Dearborn's address at the Annual Council Meeting, with some added postscripts. It does not dwell on safety's accomplishments. Instead, it presents the present accident situation in disturbing terms and outlines the steps needed to close up the gaps in our program of cooperation.

Green Cross News (page 48) reports the Congress sessions concerned with safety programs at the community level.

A list of officers, trustees and directors for 1951-52 will be found on page 40.

* * *

Do you have an employees' safety manual? Do you need one? Some excellent suggestions for preparing or improving one will be found in "How to Prepare a Safety Manual—Part II," on page 34. Part I, published in the October issue, gave helpful data on compiling, writing and editing the material. This concluding installment deals with the problems of production.

Carman Fish

Officers, Directors and Trustees, NSC

Elected at the 39th National Safety Congress

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Secretary of the Trustees—Ned H. Dearborn, president, National Safety Council, Chicago.

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OUT OUR WAY
LOOK OUT! YOU YOUNG GUYS MAKE ME NERVOUS, GETTIN' SO CLOSE TO EXPOSED GEARS LIKE THAT!
HE LIKES TO RAZZ TH' YOUNG GENERATION ABOUT THEM HAVING TO PUT COVERS AN' SAFETY DEVICES ON EVERYTHING TO KEEP TH' BABES OUT OF DANGER!
BUT HE KNOWS TH' VALUE OF SAFETY! DIDN'T HE SEND FOR TH' SAMPLE OF SOL-SPEEDI-DRI?
SAFETY CONSCIOUS
J.R.WILLIAMS
First in sales—
because it's first in value
SOL·SPEEDI·DRI
SPEEDI-DRI CORP.,
WHEN YOU BUY, BE SURE IT'S
SOL-SPEEDI-DRI
OIL & GREASE ABSORBENT
FREE SAMPLE: Fill out the coupon and mail today for big, free sample and brochure.
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East and West Exchange Data

SABRO NOGUCHI (right), chief of the Safety Section of the Labour Standard Bureau of the Labour Ministry of the Japanese government, presents a bound copy of the Japanese industrial safety codes to the National Safety Council as Ned H. Dearborn, president of the Council, autographs a copy of the new edition of the *Industrial Accident Prevention Manual* for the Japanese visitor.

Studying safety progress in the United States as a guest of the U. S. Department of the Army, Mr. Noguchi and his companion, S. Karasaki, of the employment service of the Japanese Labour Ministry, spent several hours in Council headquarters in Chicago, ordering copies of Council publications and other materials that can be adapted to the needs of their country, where commendable safety progess is reported.

Officers, Directors and Trustees, NSC

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Robert W. Woodruff, chairman, Executive Committee, The Coca Cola Co., Atlanta, Ga.

Plant Tours

When a plant tour is scheduled, it is a good idea to let workers know about it in advance and tell them who the visitors will be, *Modern Industry* suggests. Otherwise confusion and even resentment may result.

Recently Johns-Manville Corp. conducted a tour for local ministers in its Richmond, Va., plant. Posted conspicuously were signs: "Our Guests Today—Our Ministers." Employees appreciated the extra attention—and so did the visiting clergy.

for industrial *First Aid*

MERCUROCHROME*

(H. W. & D. BRAND OF MERBROMIN, DIBROMOXYMERCURIFLUORESCEIN-SODIUM)

Do not neglect wounds, however small; even scratches and small cuts may become infected if they are not promptly and properly treated.

'Mercurochrome' (H.W. & D. brand of merbromin, dibromoxymercurifluorescein-sodium) is one of the best antiseptics for first aid use. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association for this purpose.

The 2% aqueous solution is not irritating or toxic in wounds; minor injuries are reported more promptly when 'Mercurochrome' is the routine antiseptic, because treatment is not painful.

'Mercurochrome' solution keeps indefinitely; the color shows where it has been applied.

Physicians have used 'Mercurochrome' for more than 28 years.

Be sure to include 'Mercurochrome' in your first aid supplies.

*Reg. U. S. Pat. Off.

HYNSON, WESTCOTT & DUNNING, INC.

HWD

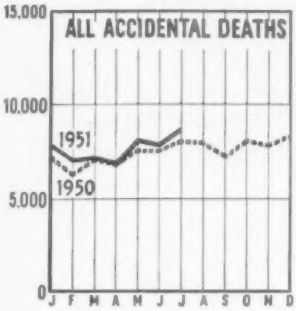
BALTIMORE, MARYLAND

THE ACCIDENT BAROMETER

Prepared by the Statistical Division, National Safety Council

ACCIDENTAL DEATHS in July numbered approximately 8,700, or 600 more than occurred in July 1950. Most of the increase occurred in public non-motor-vehicle deaths, but deaths from home and occupational accidents also were more numerous. Motor-vehicle fatalities showed no change from July last year.

During the first seven months of 1951, accidental deaths totalled about 53,500, an increase of 6 per cent over the 1950 comparable figure of 50,600. There were sizable increases in motor-vehicle and public non-motor-vehicle deaths, a moderate increase in occupational deaths, and a small increase in home deaths.



	1951	*1950*	*Change*
July	8,700	8,100	+7%
Seven Months	53,500	50,600	+6%

Motor-Vehicle Deaths

The July total of motor-vehicle deaths was 3,150, about the same as in July last year. Compared to 1949, it represented a 12 per cent increase.

Deaths for the seven months numbered 19,470, or 7 per cent more than the 1950 comparable total of 18,270. The seven-month death rate per 100,000,000 vehicle miles was 6.8, a reduction of 1 per cent from the 1950 seven-month rate of 6.9.

Of the 46 states reporting for seven months, 14 reported fewer deaths than in 1950, 1 had the same number, and 31 had more deaths. A total of 436 cities with populations over 10,000 reported a decrease of 4 per cent in deaths for July but an increase of 4 per cent for seven months.

Regional changes from 1950 in the seven-month death totals were:

North Atlantic	+ 6%
South Atlantic	+ 4%
North Central	+ 5%
South Central	+ 4%
Mountain	+ 8%
Pacific	+20%

Occupational Accidents

Deaths from occupational accidents numbered approximately 1,600 in July, or 100 more than last year. The total for the seven months was 9,700, an increase of 7 per cent over 1950.

The July frequency rate for plants in community council inter-plant contests was 7.39, a reduction of 9 per cent from last year. The July rate for plants in seven sectional contests conducted by the National Safety Council was 6.47, a decrease of 3 per cent. The seven-month rate in the community council inter-plant contests was 7.95—down 7 per cent; while in sectional contests it was 6.65, a decrease of only 1 per cent.

Public Deaths

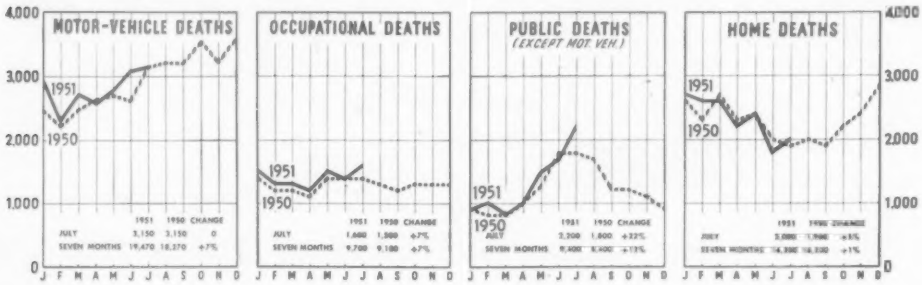
Public non-motor-vehicle deaths in July resulted in approximately 2,200 deaths, or 400 more than last year.

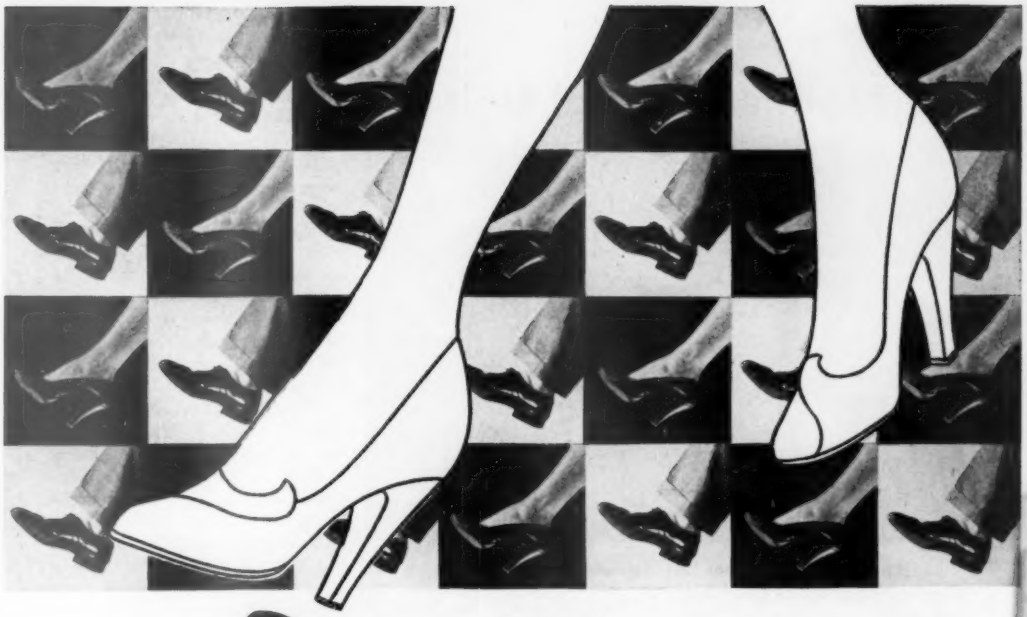
The January-July total was 9,400, an increase of 12 per cent over 8,400 in 1950. There were sizable increases in deaths from transportation and firearms accidents, a moderate increase in falls, and a small increase in drownings. Fatal burns were somewhat fewer than last year. All age groups showed increases, with the largest change recorded for children under 5 years of age and the smallest for young people 15 to 24 years old.

Home Deaths

The home accident death total for July was 2,000, an increase of 5 per cent over last year.

The total for seven months was 16,300, only 100 more than in 1950. With the exception of a moderate reduction in fatal poisonings, each of the accident types showed a small increase over last year. Increases were reported in deaths of children under 15 years of age and persons 65 years and over. Decreases were recorded for persons 15 to 64 years of age.





Safer Footing

WITH WAXES CONTAINING ANTI-SLIP LUDOX®

WALKERS GET ADDED ANTI-SLIP SECURITY on waxed floors . . . when waxes are modified with Du Pont "Ludox." That's because hard, tiny particles of "Ludox" colloidal silica surround softer wax particles . . . press into them when stepped upon and help keep the foot from slipping.

NO WONDER MORE AND MORE stores, hospitals, schools and other industrial and public buildings are using waxes improved with "Ludox." For in addition to extra safety, they are fully equal to regular floor waxes in gloss, water-resistance, freeze-resistance and leveling.

MANY SAFETY AND SANITATION ENGINEERS specify properly formulated waxes containing "Ludox." A variety of formulations are available to meet specialized needs of institutions, business and industry. And new anti-slip floor waxes are continually being developed by wax manufacturers and Du Pont working together.

ASK YOUR WAX SUPPLIER about these waxes containing Du Pont "Ludox." Most likely he can help solve your floor-wax problems. E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Dept., Wilmington, Delaware.

DU PONT
REG. U.S. PAT. OFF.

LUDOX
REG. U. S. PAT. OFF.
COLLOIDAL SILICA

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Mobile Medical Unit

AN EMERGENCY HOSPITAL on wheels is provided in this trailer unit which can be stocked with equipment and supplies needed for taking care of the casualties in a peace or war time disaster.

The trailer is a self-contained unit equipped with:

- Folding operating tables (2)
- Oxygen outlets (9)
- Automatic power generator for lighting
- Water storage tank—60 gallon capacity
- Electric water heater
- Automatic switch-over for dual oxygen tank supply
- Simple car hitch that fits practically any car bumper
- Built-in sink with hot and cold faucets
- Storage battery for starting generator
- Electric light outlets throughout the unit
- Collapsi-Cot emergency stretchers (2)
- Ample storage capacity for medical supplies, cots and blankets

The unit is 6½ feet wide, 10 feet long and 5½ feet high. It is built on a steel frame, heavy duty combat chassis. It is well balanced for travel over debris and rough terrain.

The Collapsi-Cot stretchers are manufactured by Emergency Aids Company, Chicago, which also is the distributor for the trailer units.

For Civil Defense planning, this disaster unit can be towed by a station wagon to the disaster scene and unhitched. The station wagon then becomes an emergency ambulance to bring to and take away from the operating table the treated patients. To care for patients after first aid treatment has been given, army cots and blankets should be set up near the disaster unit.

Each Safe Day Is Another "Victory"

RECENTLY the meter and service department of the Baton Rouge Division of Gulf State Utilities Company recorded "Victory No. 5478." That means 5,478 consecutive days without a disabling injury.

On July 18, 1936, Safety Director C. P. Shirey reports, a service man had parked his truck correctly when a car out of control crashed into it. The service man was severely injured. Since that day, more than 15 years ago, the department has piled up more than 1,265,000 safe man-hours. The department now has 49 employees; the average for the 15-year period has been 33.

The service department installs meters and customer services, restores service on both primary and secondary circuits, refuses transformers, operates switches, picks up wire breaks after sleet storms, and many other jobs necessary to maintain service to the communities.

During World War II women were called upon to take over more strenuous work than their customary duties of taking trouble calls, keeping records. They did an excellent job of driving trucks and servicing appliances. Some of them were wives of employees who were engaged in a different type of work on Guadalcanal and other points east and west.

According to those who know him, F. G. "Red" Hornsby seems to have the faculty of getting people to go along with him, which adds a powerful drive to the program of safety meetings, posters, literature and job instruction. Les Faures, meter foreman, Jack Donaldson, service foreman, and M. J. Cunningham, appliance repair foreman, also have had a share in making safety practices contagious.

Autumn Hazards

Anticipated pleasures of golden autumn—holiday excursions, football week ends, hunting, the scenic grandeur of changing foliage—should be tempered by caution. These are accompanied by a seasonal rise in fatal motor vehicle and firearm accidents, warn Metropolitan Life Insurance Company statisticians.

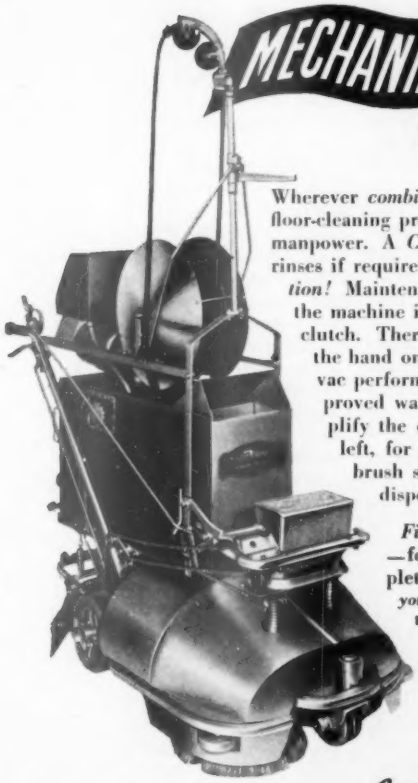
About 28 per cent of all motor vehicle fatalities occur during the three autumn months, a higher proportion than in summer, although the volume of travel drops off. Fewer hours of daylight, poor weather, and wet autumn leaves on the highways are blamed.

The concentration in autumn of one-third of the annual firearm deaths reflects the increase in hunting. A large proportion of such deaths are preventable.

Some of the fatal accidents result from hunters accidentally shooting themselves or others through careless gun handling; all too often a hunter will climb over or through a fence with his gun in a dangerous position.

Let's not clean away dollars and man-hours with costly, inadequate floor care

MECHANIZE your floor-cleaning with a COMBINATION SCRUBBER-VAC!



Wherever *combination-machine-scrubbing* is the practical solution to the floor-cleaning problem, any lesser, slower method is wasteful of money and manpower. A *Combination Scrubber-Vac* applies the cleanser, scrubs, rinses if required, and picks up (damp-dries the floor) — *all in one operation!* Maintenance men like the *four-in-one feature* . . . also the fact that the machine is simple to operate. It's *self-propelled*, and has a *positive* clutch. There are no switches to set for *fast* or *slow* — slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs efficiently and quietly. Cable reel is self-winding. Improved waterproof wiring and minimum electrical connections simplify the cleaning of the machine. *Model 213P Scrubber-Vac* at left, for heavy duty scrubbing of large-area floors, has a 26-inch brush spread, and cleans up to 8,750 sq. ft. per hour! (Powder dispenser is optional.)

***Finnell* makes *Scrubber-Vac Machines* in a full range of sizes — for small, vast, and intermediate operations. From this complete line, you can choose the size that's exactly right for *your* job (no need to *over-buy* or *under-buy*). It's also good to know that you can lease or purchase a *Scrubber-Vac*, and that *there's a Finnell man nearby* to help train your maintenance operators in the proper use of the machine . . . to recommend cleaning schedules for most effectual care . . . and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 2211 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.**

Conserve Manpower with Completely Mechanized Scrubbing

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

FINNELL

BRANCHES IN ALL PRINCIPAL CITIES

Green Cross News . . .

Activities of Local Safety Councils and Chapters

Compiled by TOM A. BURKE
Director of Local Safety Programs, Field Organization, NSC

Three Profitable Days for Council Managers

First, there were two helpful, stimulating and very busy days at the annual Managers' Conference, October 5-6, a pre-Congress program enjoyed by 126 representatives from local safety councils and state safety groups.

Then there was the important meeting of the Procedures Committee of the Conference of Local Safety Organizations which ran past midnight on Sunday, Oct. 7, official curtain-raiser for annual meeting of the entire Conference on Monday afternoon and evening, after which the members relaxed and enjoyed their annual dinner.

Two facts stand out: The managers' meeting was one of the best in years and the Conference of Local Safety Organizations emerges as a strong, well-knit organization with tremendous potential, working at the grass roots towards a common objective and serving the National Safety Council as a powerful right arm in the nation's war on accidents.

Council Managers Study Their Problems

The annual Safety Council Managers' Meeting held Friday and Saturday, Oct. 5-6, at the Stevens, featured many helpful, stimulating sessions that were enjoyed by 126 representatives of local and state councils and chapters, including several delegates from Canada.

The program featured two important sessions on financial problems, one of a general nature and the other on Green Cross campaigns. Joseph M. Kaplan of Los Angeles opened the general session with an interesting and inspiring talk on "The Key to the Cash Register" stressing the importance of enlisting and holding top leadership in the Chapter's organization and urging the managers to raise their sights in financial procurement policies.

Robert B. Leopold of Atlanta discussed the need for strong programs continually carried on. George M. Burns of Kansas City called attention to the trend toward the "one fund" campaign in money raising and urged a sound membership plan as a good answer to the problem and the best way to maintain its identity in the community.

Robert A. Pike of the NSC Western Regional Office described the new California law which makes state funds available for certain responsible local safety organizations.

Clinton W. Dreyer of Oakland led off the Green Cross financial session with "A Uniform Approach to Fund Raising" in which he pointed out that much could be gained from coordinated planning and united action among the Chapters conducting Green Cross fund campaigns. He stressed the great advertising value of using the Green Cross slogan and emblem in every phase of the Chapter's activities. Iver C. Larson of San Francisco followed with a discussion of promotional tools that have been used successfully in his area.

Walter D. Ladd of St. Joseph, Mo., got down to brass tacks with a talk on the fundamental mechanics of fund raising and J. G. (Jim) Hays of the Ohio State Council, outlined some basic, practical ideas on mail solicitation. Russell Hicks of Hamilton traced the steady growth of the dollar membership plan in the Hamilton Council.

Other programs included an interesting report on the Conference progress by Earl F. Campbell, director of Field Organization; the story of the Los Angeles Area Action Conference by Joseph M. Kaplan; an enlightening publicity symposium led by Paul Jones, director of Public Information, assisted by Dan Thompson, director of the Council's radio division and Jack Horner, news-editor.

A discussion of the place of Civil Defense in the local Council program was preceded by a talk by Gerald Shipman of the Twin Cities Area Safety Council (Benton Harbor-St. Joseph, Mich.). There was a progress report on the activities, accomplishments and potentials of the Advertising Council's "Stop Accidents" program, by Robert R. Burton, vice-president of Young & Rubicam; and a talk on women's activities and the need for stimulating greater interest among women in safety activities, by Alice C. Mills, director of women's activities for NSC.

Estel Hack of Louisville urged that more attention be given to the important matter of developing and maintaining harmonious cooperative relationships with all local groups that have—or should have—an interest in safety.

Emerson Westwick of the Association of Casualty & Surety Companies outlined the amazing growth in school driver training during reecnt years, pointing out that nearly 9,000 schools have such courses today.

An "Idea Exchange" brought to

—To page 52

- Leader in a line of popular, lightweight, plastic eye-safety devices
- MonoGoggles, FeatherSpecs, Protecto-Shields combine safety with comfort and ease of wearing
- Comfortable over prescription glasses
- Workers' willingness to wear them adds effectiveness to your eye safety program

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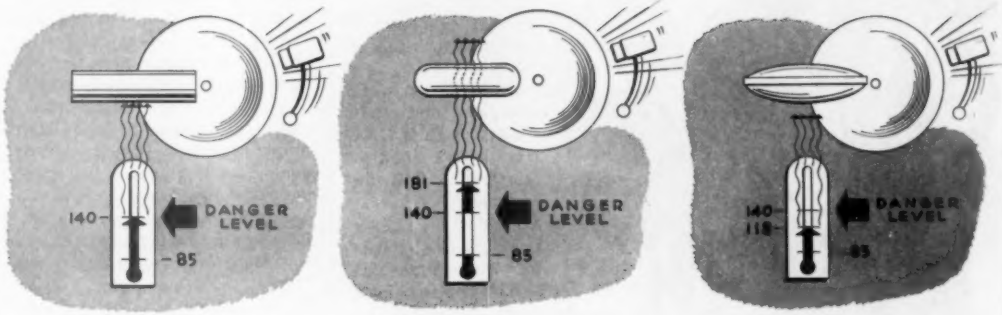

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Green Cross News

—From page 48

the dais the Department heads of NSC who submitted to a barrage of pertinent questions from the managers in a rapid-fire quiz session, mostly on NSC services.

"Projects That Pay" climaxed the two-day meeting, a series of ten-minute talks by managers on certain activities that have clicked during the past year. They included "Middletown Dramatization Week"; the Greater New York Safety Council's home safety check that reached a million homes; the Greater Atlanta Safety Council's farm safety project, patterned after "Operation Safety"; Pittsburgh's big league ball game played for the benefit of Western Pennsylvania Safety Council's child safety program; the Greater Cincinnati Safety Council's recent "Cincy-Safety" project, an intensified, far-reaching program that properly positioned the newly organized safety council in that city; the Grand Rapids plan to have experienced mercantile salesmen sell its safety package; and an excellent Kodachrome sound film on "Scooter Skill and Safety," made by the Louisiana Safety Association and the Caddo-Bossier Safety Council at Shreveport.

Dr. B. L. Corbett and Col. J. James Ashton presided at the Saturday sessions and your reporter directed the opening day program, in which he presented the plan for a comprehensive appraisal for Chapters desiring such a service.

Special Achievement Awards for the 1950-51 contest year were presented by President Ned H. Dearborn at the Saturday luncheon at which Earl Campbell presided.

Conference Acts on Important Matters

A retirement plan for chapter managers and staff members was recommended unanimously at the meeting of the Conference of Local Safety Organizations on October 8 and the project was later presented to the NSC Board for study and approval. The suggested project is known as the Pension Trust Retirement Income

Plan and follows generally the plan adopted some years ago by the American Chamber of Commerce Executives, in which a recognized trust company handles the administrative functions.

Another project of particular importance to the council administrators was the recommended establishment of a training school for Chapter managers. The proposed program was also recommended to the NSC Board and it is hoped that the first course can be started in early summer. A committee of five conference members was appointed to work with Field Organization staff in lining up the proposed course.

The Conference recommended the granting of charters to the Arkansas Safety Council, Little Rock, and the Alberta Safety Council, Edmonton, Alberta, Can. A provisional charter was granted to the Metropolitan Safety Council of New Orleans. A Class B charter was granted to the Richland Safety Council, Richland, Wash., where one of the Government's atomic projects is located.

A committee was appointed to work with Field Organization in the development of specific methods for making a comprehensive survey and appraisal of a Chapter's organizational structure, administration, programs and finances, with recommendations for strengthening any or all of these fields. It is hoped to be able to offer this as a new service to any Chapter desiring such an analysis.

A policy for the gradual rotation of members of the Procedures Committee was recommended.

The Conference elected Robert R. Snodgrass of Atlanta, the new NSC Vice-President for Local Safety Organizations, as chairman of the group for the ensuing year and Dr. B. L. Corbett of Milwaukee was made vice-chairman.

Amended rules for the Inter-Community Plant Safety Contest and the Inter-Community Fleet Contest were adopted. The group also voted for a revised schedule of membership charges for state safety organizations supported wholly or in part by state funds.

The Conference meeting was followed by the annual dinner. Hon. Lee E. Skeel, president of

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In Business for Your Safety

Keep Learning!

By E. W. BENDER, JR.

An effective safety program needs constant feeding.
And be sure to keep the boss informed of its progress

THE safety engineer who stands pat on previous accomplishments is risking a general letdown. He can never acquire sufficient knowledge and experience not to need new ideas and methods.

He has a responsibility to his company to keep improving himself and his work, and to keep management fully posted of his progress.

The safety engineer who makes an appraisal of himself and his work might ask:

1. Am I trying to improve personal relations with employees, supervisors, executives?
2. Do I devote enough time to the important phases of my work?
3. Have I an open mind to new ideas when conversing with friends and business associates?
4. Am I too conceited or too lazy to take courses of study that will aid me and my company?
5. Do I visit other plants to see how the other fellow operates?
6. Do I invite other men to look over our plant for exchange of ideas?
7. Am I willing to dig in once in a while and get soiled while making inspections, investigations, or getting a low down on a recommendation in the plant?
8. Do I consider myself in an advisory capacity to management, selling ideas, believing in education rather than force?
9. Have I full knowledge of all jobs in the plant, the raw materials handled, and a fair idea of processes and products?
10. Am I assisting in setting up physical and personal protection requirements for various jobs so that new and transferred men are properly placed and know what protection they will require?
11. Have I checked the operation of the maintenance department? Is it working on a breakdown or a preventive maintenance basis?
12. If the maintenance department is allowing recommendations to pile up, what am I doing about it? Are they still advising me when new and relocated machinery is installed?
13. Have I done all I can in soliciting the cooperation of the engineering department (in large plants) by having them refer the design of new equipment to me for review?
14. Do I keep in close contact with the purchasing agent to see that safety equipment, clothing, or material meets recognized standards?
15. Am I satisfied that all supervisors have the knowledge and ability to control accidents in their departments? Or is further instruction for foremen necessary?
16. Do I keep the works manager and interested executives fully informed of my activities and objectives, verbally and in monthly reports?
17. Have I recently checked our over-all plant loss-control program and set up proposals which will lead toward the no-accident objective?

Some safety engineers may be spending too little time developing a satisfactory over-all program and presenting it to management. I recently discussed this matter with a safety engineer who gave me the following example.

He had full charge of safety activities of three plants operating within 10 to 15 miles of each other. An unfavorable accident experience had developed over a period of several years, principally from unsafe practices in the operation of dangerous machinery and in connection with material handling. Most of his work was limited to inspection, investigation of accidents, and the development of statistics. He had never given much thought to an over-all controlling program.

After many attempts he was finally able to interview top executives who gave him the green light for a full study of plant operations and activities, including a check on the organization structure of the company.

Results of Neglect

He found that the maintenance department operated principally on a breakdown basis, letting safety work orders slide. They had insufficient labor to do the required work and they had no system of recording repair orders or giving much thought to machine guarding after an accident occurred. Housekeeping conditions were tolerable but they did not supply sufficient labor in the process operations for regular shop cleanup.

Skilled employees were on a piece-work basis and cared little about anything except operation of their machines. Supervision in general was concentrated quantity production with considerable rejects of finished products that were proving to be very costly. Labor turnover was high and new employees were given a minimum of

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E. W. BENDER, JR., *is Chief Engineer for Industrial Products Company, Philadelphia. For 21 years he was with the American Mutual Liability Insurance Company and until recently was supervisor of engineers in the Philadelphia District. He is a member of the American Society of Safety Engineers, Industrial Hygiene Association and American Society of Mechanical Engineers.*

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job training before they were put on hazardous operations. The superintendent did not feel the foremen should be held accountable for accidents in their departments and accidents were not thoroughly investigated by foremen. There were few satisfactory recommendations except those developed by the safety engineer. On the other hand, equipment was reasonably well guarded and machinery was properly laid out for good production.

The engineer developed an excellent over-all report containing the above conditions as he found them. He presented it to management at a conference and it was accepted in full. With executive members present at foremen conferences, all proposals were reviewed and definite action taken. At these conferences members of management secured a much better understanding of accident prevention and its part in production operations.

Following the inception of the conferences for an entire year, two of the plants operated without a disabling injury and the third plant had only two minor cases. This was not just lucky as subsequent experience was also satisfactory.

In this case the safety engineer did a commendable job. Management can be sold a loss control program if the facts and proposals are properly presented, that accidents can be controlled and a plant can show a profit for every dollar invested in safety.

In setting up an adequate program, there should be clear-cut lines of responsibility and authority in order that all in the organization have a common understanding of duties and authority.

Summing up, the safety engineer can aid management in attaining the following objectives:

1. A definite statement of policy toward safety to be issued by management.

2. A sincere interest that will reflect to employees of all divisions of management that safety is a "must" program.

3. Making certain that the loss prevention program is accorded the same consideration as any other program per-

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Norwegian Safety Leader Visits NSC Offices

AMONG RECENT VISITORS from other countries to National Safety Council offices was Tor Arnevag, of Oslo, Norway. Mr. Arnevag, who is superintendent of Vern og Velferd (Protection and Welfare), the Norwegian safety organization, is one of several representatives of European countries who have been studying accident prevention methods in the U. S. A. under provisions of the Economic Cooperation Administration.

The Norwegian association has a membership which includes the leading industries of the country and it receives some aid from the government. Both unions and employers' associations are represented. Chapters of the association are being established in Bergen and Trondheim.

A permanent exhibit of safety equipment and educational materials has been established in Oslo.

The association was established in 1937 and was just beginning to develop an effective program when the war broke out. During the German occupation accident rates soared. Maintenance of equipment was neglected and the patriotic incentive for preventing accidents was lacking, since production in many industries helped the enemy.

The program has been primarily industrial although some attention has been given to home safety. Traffic safety has been handled mostly by police departments. Safety instruction in trade and technical schools is being promoted.

Since the war an increasing amount of literature has been issued, including slidefilms and pamphlets for workers. Many National Safety Council publications have been translated. One result of enemy occupation during the war, Mr. Arnevag said, was a revulsion against posters. The Nazis used them so freely for emphasizing obnoxious restrictions that this useful medium of instruction became associated with unpleasant conditions.

Mr. Arnevag's six weeks' itinerary in the U. S. A. included Washington, New York, Boston, Providence, Chicago, Seattle and San Francisco. On his trip he visited government agencies, trade and other associations, insurance companies and industrial plants.

Tor Arnevag (second from left) superintendent of Norway's Protection and Welfare association, looks over a sketch from the Council's new Safetygraph, "Save Your Own Skin." Others in the picture, left to right: Roy Benson, assistant manager, Industrial Division, NSC; Carman Fish, editor, NATIONAL SAFETY NEWS, and Cliff Benton, staff artist.

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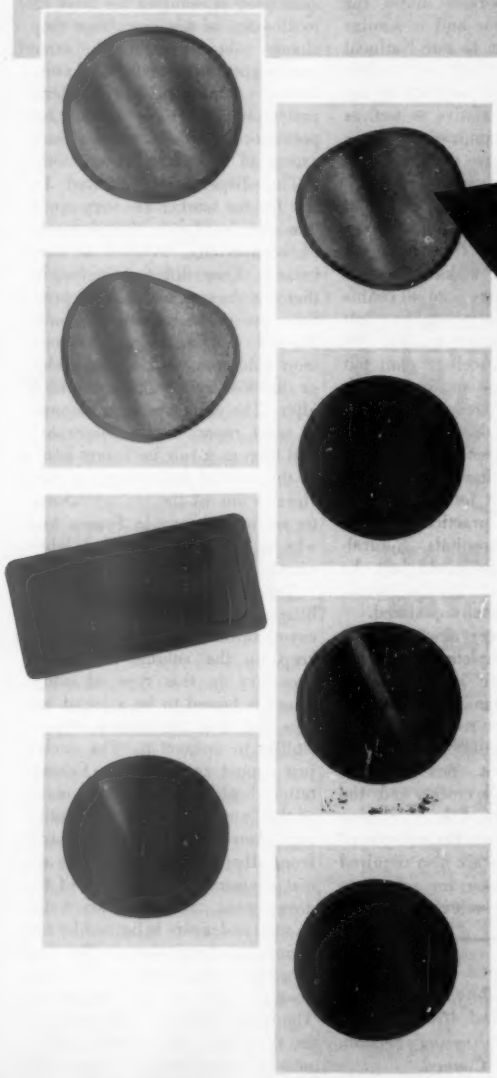

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Industrial Medicine in France

By C. F. SHOOK, M.D.

MONDAY, June 4, 1951, I had the pleasure of being in Paris, France, and meeting with Mr. E. Perrin, director of the National Institute of Security, and his excellent staff of advisors. His organization operates under the Minister of Labor and is similar in many respects to our National Safety Council. Both are leaders in their own field and act as advisors to the legislative as well as the industrial organizations of the country. Both have the same goal —health and safety.

The French are very proud of their industrial medical coverage for their people. They have enacted legislation making medical service compulsory and available not only to the factory laborer but to the office worker as well. On paper it is an excellent plan but unfortunately, like socialized medicine in England, it is not 100 per cent workable, due chiefly to a shortage of professional personnel. France does not have many graduate nurses except for the Catholic sisters who do practically all of the nursing in hospitals. Naturally, these women could not be transferred to industrial work, even if professionally qualified.

In France every new employee must have a complete physical examination before he can go to work. These examinations are as thorough as one required for an insurance examination, according to my informant. Stress is laid upon proper placement and the recommendations of the examining physician are final. Periodic physical examinations are also required but re-examination for return to work following serious illness, or when a change in the type of work is being made, are compulsory. It is interesting to note that a standard government form has been adopted and serves everywhere. Unlike England, where a new examination is required for boys 15 to 18 years of age every time they change jobs, in France the same examination is good for any number of employers. In England pre-employment examinations for persons over 18 are not necessary except in hazardous occupations.

The dispensaries required by law for the worker are very much like ours insofar as the treatment of occupational injuries is concerned. They differ, however, in that the doctors and nurses practice preventive medicine only. They do not treat even the common cold, the nagging headache, or that lost feeling of the morning after. The employee who becomes ill must report to the dispensary and then as a rule he is sent home to the care of his own physician. Here is one of the reasons absenteeism is so heavy in France and why a shortage of skilled labor exists.

The nurse in the dispensary does little more than aid in physical examinations, render first aid and keep up the volume of records necessary in this type of setup. There is bound to be a lot of red tape and it is the nurse's responsibility to unravel it. The doctor just cannot be bothered. Consultation, health education and many of the "niceties" which distinguish our American industrial nurse from others are performed by social advisors in the employ of the government. Naturally her value in such endeavors is limited by her training and experience. She does have training, however, in psychology, first aid and sanitation. The social advisor who met with us that day was mentally alert, neat in appearance and apparently

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DR. C. F. SHOOK *is Medical Director, Owens-Illinois Glass Co., Toledo, Ohio, and Medical Advisor, Industrial Nursing Section, National Safety Council.*

competent in her field. She certainly had a lot of answers for me.

All companies employing 50 or more persons must have a committee for hygiene and safety. The plant safety engineer and the industrial physician play important roles here. The latter is responsible for hygiene and his recommendations as a rule are followed carefully.

The government has neither the personnel nor facilities and equipment to provide the smaller industries with individual medical services. They have, however, established centrally located mutual dispensaries available at all hours to serve each plant.

The larger industries employing large numbers of workers have recognized the shortcomings of the present system and thus provide their own dispensaries. They in turn operate very much like ours in trying to better the health of the employee, cut down absenteeism and especially lessen the accident rate. They recognize the economical advantages where often the others do not.

Need a Geiger Counter?

AMERICA's first "atomic age department store" opened recently in New York—and already a rush is reported for "Sniffers," "Snoopers," "Class-masters," "Cutie-Pies," and "Ferrets," as vari-type radioactivity detectors are called. Now a Geiger counter can be purchased across the sales counter as easily as a wrist watch and about as cheaply.

Started by several former atom bomb scientists, the Radiac Company will supply everyone—prospectors, medical doctors, laboratory technicians, civil defense workers, hobbyists and engineers—with atomic instruments.

Like hot rods and military planes, Geiger counters have catchy names such as the Super-Sniffer, the Ferret, Classmaster, Cutie Pie, Civion, Snooper, Zeuto, and Professional. A near relative of the Geiger counter is the Scintillometer, which is said to be far more sensitive and can detect deeply buried uranium bearing ores even from low flying airplanes.

ANNOUNCING...

another SURE STEP TO PROTECTION

NEW BUFFALO better-built

STAINLESS STEEL
DRY CHEMICAL
FIRE EXTINGUISHERS

The NEW, durable, extremely light weight Buffalo *stainless steel* dry chemical extinguishers give instant protection against gasoline, paint, oil, varnish, alcohol . . . all flammable liquid fires. They are ideal for use in all types of industries and on Busses and Trucks. Simplicity of operation and extreme light weight are featured in the NEW Buffalo *stainless steel* dry chemical extinguisher. In use, it instantly releases a heat-resistant, flame-suffocating, chemical cloud-like stream, up to 20 feet. The insulating effect of the chemical cloud allows the operator to get to the seat of the fire. The efficiency of Buffalo *stainless steel* dry chemical extinguishers exceed Underwriters' Laboratories requirements.

The NEW Buffalo *stainless steel* dry chemical extinguishers are available in two models: 20 pound; and 30 pound sizes. Consult your classified telephone directory or write for your nearest Buffalo representative.

- INSTANT FINGER TIP CONTROL
- LIGHT WEIGHT . . . EASY TO HANDLE
- STAINLESS STEEL CONSTRUCTION
- LONGER RANGE

Underwriters' Laboratories Approved

BUFFALO FIRE APPLIANCE CORPORATION

DAYTON 1, OHIO

Escape from Noise

By DR. HOWARD C. HARDY

A GREAT challenge to the architect of this generation is to solve the problem of providing a better acoustical refuge for man against the ever increasing noises and disturbances of his high-speed civilization. Often the unconscious reaction of how a place sounds, determines the acceptance of a structure as a pleasant place in which to work or live. Thus the architect is finding that, while considering the usual and mechanical aspects of the structure, he cannot neglect the more subtle effects of the acoustic environment.

The problem is brought more into focus and made more difficult because modern labor costs and shortages of building materials have resulted in the development of new lighter structures designed primarily to support building stress with the smallest weight. As a result, many structures which are well engineered mechanically, give us a feeling of cheapness and flimsiness because of their inferior acoustic qualities.

It is important, therefore, that the architect have cognizance, at least of the more familiar acoustic phenomena, before undertaking a major construction. He can, by this means, avoid the pitfalls which have resulted in some of the acoustic monstrosities which have been and are being built.

The elementary information that the architect should possess has to do with (1) man's hearing mechanism; (2) how acoustic energy is measured; (3) how sound waves are propagated through space; (4) the effect of sound absorbing materials on reducing the reflection of sound; and (5) factors which influence sound transmission through walls and other barriers.

In addition, there are more technical matters such as the effect of sound and noise on listening, the positioning of mechanical equipment to prevent unfavorable reaction, the facilities for sound reinforcement apparatus, and many other details.

Nature has fitted man with a hearing mechanism which can perceive signals over an enormous range of amplitude. In addition, it can distinguish many other parameters such as frequency and variation of intensity with time. In order to measure adequately man's subjective reaction, it is necessary to take all these factors into account, if only qualitatively. Fortunately, much scientific information is known about hearing sensation, in fact much more than about any other of our sensory perceptions.

Sound is transmitted through our atmosphere because of its elastic properties. Although the physical aspects of acoustic phenomena are reasonably well known, it is impossible to describe these phenomena in simple mathematics, chiefly because the wavelengths of sound, 70 feet to less than one inch, cover the same range as the architectural objects which effect their propagation. Recent research has been directed, therefore, toward similitude studies. Some very accurate results have been predicted inexpensively by means of architectural models.

The modern development of acoustic materials and their widespread use have greatly outpaced research in sound transmission through partitions and building structural supports. For instance, only recently has any research been done on sound transmitted through piping systems.

Architectural design also has not kept pace with modern developments in electroacoustics. Despite the widespread use of public address systems, piped music in restaurants and factories, and the almost universal home use of radios and (recently) television, little thought has been spent by the architect on the planning of such installations which are as much a part of the building as the lighting, heating, and ventilating.

The mysteries of many of the complex acoustic phenomena are being gradually dispelled. As teams of scientists, acoustic engineers, and architects tackle these problems, there can be no doubt that the architect's professional accomplishments in adding beauty, comfort, and well-being to our surroundings will be even greater than they are today.

DR. HOWARD C. HARDY *is Supervisor of Acoustics and Vibration Research at Armour Research Foundation at Illinois Institute of Technology. This article has been adapted from a talk before the American Institute of Architects, Chicago, May 8, 1951.*

Fete Coal Mine Foremen For Safety Records

Sixty-five coal mine foremen were given awards and a holiday weekend in Washington recently for outstanding safety records. The men represented 168 foremen who had achieved records of four or more years without a lost-time accident for themselves or their crews.

As guests of the National Coal Association, the foremen were entertained at a banquet where awards were presented to them. They were taken on sightseeing tours, saw a major league baseball game and visited a nearby Bureau of Mines Laboratory.

These men were a few of the nearly fifteen hundred coal mine foremen who had perfect safety records during the last year. Some of these supervisors and their crews have operated fifteen and twenty years without a lost-time accident.

It Takes 500 Tons of Equipment for Just One Telephone Exchange

Five hundred tons of equipment and 62,000 man-hours of work are needed to install just one 10,000-line Dial Telephone Exchange.

Here's the story of months of work condensed into two minutes of reading time. (Bear with us, please, if several of the words get technical.)

There are 1800 crossbar switches, 4000 multi-contact relays and 65,000 conventional relays. These automatic switching mechanisms open or close millions of telephone circuit paths.

Eighty miles of cable are needed to connect all this apparatus. There are 2,600,000 soldered connections, each one a careful hand operation.

All that is for only one Telephone Exchange to serve one community. At present-day prices, the cost runs to $1,500,000.

The money for these new facilities must come largely from investors who are willing to put their savings in the business.

Only through reasonable earnings can the telephone company attract the new money that is needed to do the job.

BELL TELEPHONE SYSTEM

Temporary Sprinkler Protection

By FRANCIS L. BRANNIGAN

The idea proposed is a modular temporary sprinkler system constructed of standard units coupled together. Depending upon the need, a fire protection engineer would have one or more of these systems at his disposal. At a minimum of cost a system or systems could be installed in a temporary building or temporarily in a permanent building and removed when the need no longer existed.

* * *

THE PRESENT war emergency will undoubtedly see a duplication of many of the tremendous fire loss potentials which existed during World War II. Any fire protection engineer who serviced governmental risks, whether directly under the control of the armed forces or in contractors' plants, can relate ad nauseam stories of untold millions of dollars in critical supplies stored in buildings entirely unsuited to the purpose; of vital operations using critical materials or subassemblies performed in makeshift fire traps.

The actual cost in dollars and lives of the tremendous fires which occurred with monotonous regularity can never be computed, but each of us can cite instances, such as the fire in a navy yard warehouse, which delayed the commissioning of a sorely needed Essex class carrier for six months.

The universal answer, of course, to this problem, is automatic sprinkler protection. This is easy to say, and if all the recommendations for automatic sprinklers which were never carried out were piled up, the result would be a substantial monument to engineering, sound in theory but devoid of an impelling urge to provide a reasonably satisfactory solution to a pressing problem. It profits none for the fire protection engineer surveying a smoking ruin to prove that six months or a year ago he recommended sprinklers and the recommendation was bogged down "in channels."

Those of us who were active in fire protection in the services soon realized that the most effective way to provide fire equipment such as extinguishers, fire hose and even fire apparatus was somehow to obtain the authority to have under our own control a store of such equipment. Then when a situation presented itself where for instance, four fire extinguishers were needed, the engineer rather than making a recommendation that four fire extinguishers be obtained could state, "I will ship you four fire extinguishers from my stock. When you receive the four that you ordered you can return mine." (As an incidental benefit, a commanding officer who receives a service like this is far more likely to cooperate in carrying out those recommendations which involve changes in procedures, etc.)

A Workable Compromise

How often did the fire protection engineer fervently wish that he had in his back pocket a sprinkler system which he could order installed immediately rather than go through the tortuous and uncertain "channels" of approval knowing that even if approval is obtained, bids let and the system installed, the situation very possibly will have changed radically. Very often as in the case of on site construction warehouses or temporary buildings constructed for the purpose of assembly of unique scientific equipment, it is known that the life of the building will be short and fire protection consists mainly of a prayerful glance toward heaven.

It is believed that the basic outline of a solution to this problem is proposed herein. It is realized that the proposal is by no means completely thought out but it should form the basis of a discussion in which others in the fire protection field can bring to bear their knowledge to make it completely satisfactory and workable.

Wartime Situations

A sprinkler system today is a product of 75 years of evolution. Changes in standards are not lightly accepted and the enviable record of sprinkler performance is due in large part to the many factors of safety in design and operation that have been introduced over the years. In a wartime situation, however, time and a *reasonably* satisfactory solution of the problem are often of the essence.

Every military weapon and every operation is a compromise between that which is theoretically desirable and that which is practical. History is replete with the names of military failures who failed to seize the opportunity and delayed until everything was perfect. The same type of thinking must be guarded against in fire protection.

It is proposed to adapt the module principle of construction to sprinkler systems. The idea is to provide a dry pipe sprinkler system of 100 heads to protect 10,000 feet of space. The branch pipe units would be 10 foot lengths of 1½ inch pipe with a sprinkler

—*To page 74*

FRANCIS L. BRANNIGAN *is Assistant Chief, Fire and Accident Branch, United States Atomic Energy Commission, New York Operations Office.*

Awards for Safety

Curtis Companies, Inc.

"The biggest and best plaque we have ever awarded to a policyholder," was the comment of Fred W. Braun, vice-president and chief engineer of Employers Mutual Liability Insurance Company, on the insurance company's award to Curtis Companies, Inc., Clinton, Iowa. Between August 13, 1948, and July 16, 1951, the company operated 3,634,107 man-hours without a disabling injury, which is believed to be a new record for sash and door manufacturing. At the time of reporting the record was still unbroken.

The bronze plaque was presented August 20, by H. J. Hagge, president of Employers Mutual. Present at the ceremony, which was held in the Curtis club room, were George M. Curtis, president, and G. L. Curtis, chairman of the board, of Curtis Companies.

Aridor Co.

For completing 317,750.5 man hours without a disabling injury since October 6, 1950, the Aridor Company was awarded the Edmund F. Ball Safety Award at a recent dinner in the plant. John W. Fisher, vice-president of Ball Brothers Company, made the presentation.

The Edmund F. Ball Safety Award, inaugurated by the president of the Ball Brothers Company of Muncie, Ind., of which Aridor is a division, is given to any Ball plant which operates one year without a disabling injury. Approximately 200 employees are engaged in manufacturing commercial and home-canning closures for glass containers.

Safe Work Paid Off

Puncture-sealing tubeless tires were won by 104 employees in injury-free departments at B. F. Goodrich Company, in safety drawings during the first seven months of 1951. In addition, $10 shopping certificates were awarded to scores of other employees in safe departments.

STOP-FIRE is the LINE for complete FIRE PROTECTION

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Stop-Fire was first with CBM—and the Redi-Grip is still another Stop-Fire original. Adopted by the U.S. Air Force, it is fast finding application everywhere. Anyone can operate the one-hand Redi-Grip in a second. It responds instantly. It works through a 360° arc. It kills fire fast!

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Pump Type	Soda-Acid
Redi-Pressure	Foam
Redi-Grip	Cartridge-Operated
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Carbon Dioxide	The Mighty-Midget

FREE—FIRE GUIDE BOOKLET

STOP FIRE INC. TRADE MARK

BROOKLYN 1, NEW YORK

The Desert Shall Blossom

(From page 31)

Coulee, on the edge of the land to be irrigated. And it is just as symbolic that Harold, after years of concern for jackhammer operators, for preachments on the virtues of hard hats for construction workers, is beginning to find time now to concern himself about safety in farming operations and the arrangements for sanitation in new and rapidly growing communities.

His big job, still, is construction safety—a safety program which must be administered across almost endless miles of barren plain and rocky coulee. Up at the dam, they are still adding giant pumps to heave water up over the divide and into Grand Coulee. To the south, crews are operating at all the various stages of construction of canals and tunnels and siphons. Housing is being built for the huge force that will be necessary to patrol and maintain the canals when they carry water next year.

Harold Wersen's problem is complicated by the fact that this work is being done by a host of contractors, large and small, with all possible varieties of attitudes toward safety effort.

There was a time when the attempt to convince contractors that safety was worthwhile was a weary struggle. Wersen feels that the crisis is past—that the majority of contractors, particularly larger ones, now see the value of safety work and are willing to live up to government standards or even exceed them.

This change is the result of policies which reach far beyond the jurisdiction of safety personnel, right to the top management of the project.

Safety is written into the contracts. The Bureau of Reclamation's contracting officers are responsible for seeing that contractors live up to the contract safety provisions. The representatives of contracting officers and the supervision on the site are instructed to secure full compliance with these provisions on the job. It is a flat, legal responsibility of contracting officers to maintain, as far as possible within their power, the health and safety of all workmen on the project.

To dramatize this point, government inspectors on all the Columbia Basin Project, who investigate all work being done for progress and quality, carry an inspection form in which the very first point to be reported about a job is the safety and accident prevention situation. As a Bureau handbook says:

"Every inspector of work or material, on contract work as well as work under government forces, shall act as a safety inspector. . . . Inspectors shall approach unsafe practices in the same manner as they do violations of specifications, in the spirit of wholehearted compliance and cooperation."

Before work starts on a contract, government men and contractors hold a meeting to plan a safety program for the work to be done. As the job progresses, frequent meetings are held. Some of these involve the "high brass." Some are informal, tailgate sessions out under the hot desert sun, with the safety engineer or one of his assistants talking informally to a contractor's foreman and his men.

A direct and vigorous safety program for government employees on the Columbia Basin project has paid big dividends. In the five-year period, 1942-47, the frequency rate averaged 46.8. It dropped to 31.16 in 1948 and to 26.12 in 1949. The improvement continued in 1950, and that year the frequency rate was only 20.81.

The lowered accident rate has been accomplished during an accelerated construction program when high hazard contract operations increased from approximately 15 (during 5 year period), confined to limited area, to over 80 (during 3 year period), and man-hour exposure tripled with these operations scattered over 6000 square miles. Full responsibility for safety on their job by the supervisors is the answer and the reason for the improvement.

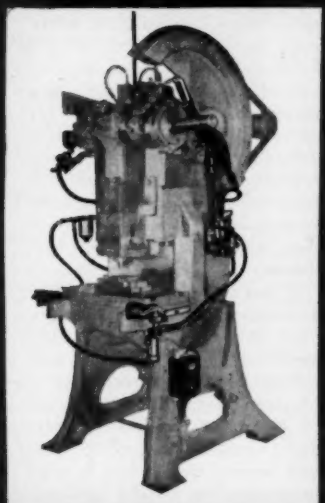
An important part of the safety program is special training classes for field engineers, inspectors, resident engineers and party chiefs. This year, 452 employees attended these training sessions. The course contained 24 hours of instruction on safety and health matters. Lectures were few and far between—most of the class work consisted of demonstrations, visual presentations and discussions.

The safety program also includes five-minute talks by supervisors and film showings. In one month this year, there were fourteen first aid classes with an at-

Riding High

When this lift truck left the factory, the manufacturers never suspected it would be put to this use. This float was entered by the Prat-Daniel Corp. in a parade celebrating the 300th birthday of the city of Norwalk, Conn. A beach cabana was attached to the lift truck and the girls rode high above the heads of the spectators. Lowering the cabana when it was necessary to clear bridges, traffic lights and overhead wires seemed to fascinate the crowd.

Years of *SAFETY* for Minutes of Thought



Schrader Pneumatic Two-Handed Press Control. This device converts continuous action clutches to single action. Easily and quickly installed on most types of power presses.

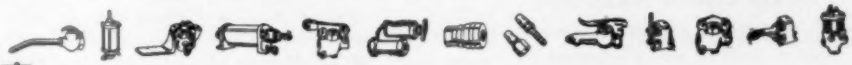
NOTE: Foot operated controls and combinations of hand and foot operated controls are also available.

SCHRADER TWO-HANDED PNEUMATIC POWER PRESS CONTROLS are standard in shops all over the country. They increase safety in two ways: 1. They are true *two-handed* devices; both hands must be used to operate the press and operator cannot defeat purpose of control by tying down one lever. 2. They are so easy to operate they reduce fatigue, regarded as one of the leading causes of accidents.

SCHRADER CONTROLS PAY THEIR COST MANY TIMES OVER

SCHRADER CONTROLS are low in first cost and, unlike many protective devices, on the job every minute. Wherever used they reduce operator fatigue and the fear of accidents. This means better morale and increased production . . . especially on the fag end of the shift. Don't wait for an accident to remind you to buy SCHRADER POWER PRESS CONTROLS when you can save money, reduce accidents and increase production every day through their use. A few minutes thought now may give you years of safety. Write today for information and free literature.

ALWAYS SPECIFY SCHRADER, THE COMPLETE LINE OF AIR CONTROL PRODUCTS



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- Air Strainers ☐
- Uniflare Tube Fittings ☐

tendance of 281. New and rehired employees attend safety indoctrination courses. Vehicle drivers must carry project permits to operate on the project.

The impression a casual visitor gets of the Columbia Basin safety work is that it is well planned, solidly backed by management, intelligently executed by the safety personnel. Harold Wersen makes no claims for the uniqueness of any of his efforts. He quite clearly believes that a steady, consistent application of well-established safety techniques is more important than stunts and flashes of brilliance.

If that makes Harold sound like a routine, unimaginative safety man, let me kill that idea. His anecdotes about fiery clashes with contractors in the earlier days of his stay at Grand Coulee are proof of the contrary. Unfortunately, those anecdotes are off the record, because Harold is a believer in cooperation. He can fight and has fought, for basic points. But present good relations are what is important, not a narrative of past collisions.

You can get a pretty good argument in many places on the worth of projects such as Grand Coulee Dam and Columbia Basin irrigation. It is no part of this reporter's job to pass judgment on that issue. But I do say that the safety job on those projects is being well done, and that we as taxpayers are beneficiaries of that dwindling frequency rate.

Extension Forks for Large Loads

Slip-on extension forks used on fork-lift trucks of the Westinghouse Sturtevant Division plant in Boston, permit quick and easy handling of pallets twice as long as normal. Before this equipment was introduced, outsized package material required special handling, sometimes special palletizing.

Steel Foundry Safety Contest Announced

Continuing improvement in steel foundry safety practices is anticipated as the direct outgrowth of the 1951 national safety contest sponsored by Steel Founders' Society of America, according to the announcement here by K. Kermit Donaldson, executive vice president of the national technical organization.

The national competition, open to more than 150 member steel foundries, will be conducted during the months of June, July and August, a quarterly period during which precedent indicates accident frequency rates tend to be high.

Rules of the American Standards Association will be used to determine lost-time injury rates for the participating foundries, Mr. Donaldson said. Awards will be based on statistical results of monthly reports filed with the Society under rules and procedures formulated by its National Safety Committee. Frequency rates developed from the monthly reports will provide the basis on which national contest winners are to be determined.

For purposes of the competition, steel casting industry member foundries will be divided into four groups based on the number of man-hours of exposure per month, as developed from analysis of lost-time injury reports for the 1950 contest period. For participation, however, the minimum monthly man-hours of exposure must be equal to at least 50 per cent of the average man-hours of exposure during the first five months of 1951.

A permanent plaque will be awarded to the winner in each of the four size groups; and a certificate of achievement will be presented to each foundry having a lost-time accident frequency rate of 10.0 or less (per 1,000,000 man-hours of exposure) for the contest period. In addition, honorable mention awards will be made to those foundries whose record for the 1951 contest period shows a substantial improvement over 1950 figures.

Conduct of the 1950 contest, Mr. Donaldson pointed out, was highlighted by continued maintenance of a near-record low in the industry's cumulative lost-time injury frequency rating. On a national basis, he said, the cumulative rating of the industry was 20.2, compared to the record low of 19.1 established in 1949, and the relative high of 28.4 for the same 1948 period. With approximately the same number participating on an industry-wide basis, 32 steel foundries won top honors with perfect safety records in 1950, with a total of 47 member companies, in all, qualifying for awards.

NEW ROCKWOOD FOAM LIQUID
NEW ROCKWOOD FOAM DEVICES
NEW ROCKWOOD METHODS
for
APPLYING FOAM TO Gasoline Fires

New Rockwood *Double Strength* FOAM Liquid and FogFOAM devices enable fire fighters to cover burning surfaces faster with a blanket of FOAM that completely seals off combustible vapors. The FOAM blanket will quickly reseal if broken by trucks, hose, foot tracks, etc. The new Rockwood method of applying FOAM to fires involving oil, gasoline and other flammable liquids and materials will extinguish fires with far greater speed and with less work than with old style methods. Rockwood FOAM is designed to give you the most efficient results in fire fighting and to protect apparatus from damage. For complete operating and installation data and prices, write today.

The most efficient way to apply Rockwood FOAM Liquid and wetting agent to most fires is thru Rockwood fire fighting devices.

ROCKWOOD

ROCKWOOD SPRINKLER CO.
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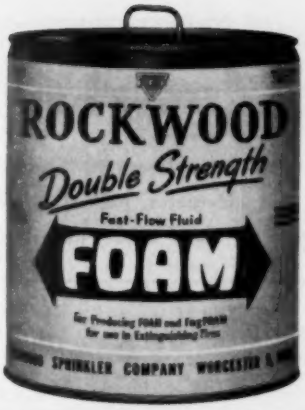
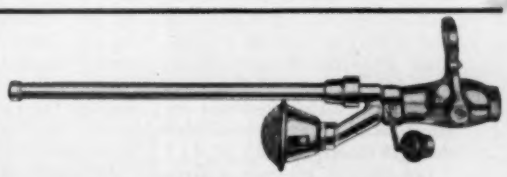
Portable Fire Protection Division



1. Rockwood's new FOAM Liquid produces FOAM and FogFOAM for use in extinguishing flammable liquid fires. It can be automatically mixed with water supplied to the new FFF FogFOAM Nozzle or to the new "FF" Extension by means of the hose line FOAM Eductor — or Rockwood FOAM proportioning systems built into fire trucks. Rockwood regular FOAM is still available for use with Rockwood devices.

2. New *Lightweight* type FFF Rockwood FogFOAM Nozzle with FogFOAM screen. Available in three sizes for service on 1½" and 2½" or 3½" hose. Discharges (1) FogFOAM (with FogFOAM screen) (2) Solid FOAM stream (with FOAM shaper) (3) High velocity WaterFOG pattern.

3. Rockwood FOAM Eductor introduces FOAM Liquid into fire hose lines for use with Rockwood Type FFF FogFOAM Nozzles or "FF" Extension units with SG-60 Nozzles. Eductor can be attached between discharge of fire truck and fire hose line, connected between hydrant and hose line or between two lengths of hose. Separate models are available for FOAM and water wetter.



4. Rockwood *Lightweight* "FF" Extension unit with SG-60 WaterFOG Nozzle attached. The "FF" Extension can be easily attached to a ¾", 1" and 1½" SG-60 WaterFOG Nozzle by simply removing high velocity WaterFOG tip and inserting "FF" Extension. This unit discharges high velocity FogFOAM thru FOAM screen or long range solid FOAM stream thru FOAM shaper — also high velocity WaterFOG, solid water stream or low velocity WaterFOG.

Industrial Health

Abstracts of current literature on Industrial Hygiene, Medicine, and Nursing

By F. A. VAN ATTA, Industrial Department, NSC

Neurotic Disability

Neurotic Illnesses among Industrial Workers—A Practical Working Method of Rehabilitation. Anonymous. Industrial Health Bulletin of the Department of National Health and Welfare of Canada, Vol. 6, No. 11, August 1951.

WHEN WARTIME SURVEYS in British factories showed that about one-fourth of all working days lost by male workers and more than one-fourth of all days lost by female workers through sickness stemmed from neurotic illness, a group of industrialists set out to do something about it. With Lord Horder as chairman they formed the National Council for the Rehabilitation of Industrial Workers and collected from industry the funds to establish the Roffey Park Rehabilitation Centre.

The Centre was opened in 1944 with 150 acres of grounds, necessary buildings and a staff including four psychiatrists, a social worker, a physiotherapist and other necessary ancillary services. By the end of that year it had treated 430 patients and now averages approximately 1000 patients per year through the course of treatment which may take from three weeks to 10 weeks, depending upon the particular case.

Pleasant surroundings, good diet and regular activity are considered an essential part of the treatment and patients are kept up and active at gardening, craft work or sports as much of the time as possible. The usual devices of psychiatric treatment are also used but are not considered the total treatment.

Considerable attention is given to the placement of patients leaving the Centre since case studies have shown that a considerable proportion of the patients would probably not have required treatment in the Centre if they had been properly placed when they entered industry in the first place. The Ministry of Labour cooperates in placing people who want to change their employment on leaving the Centre.

All treatment at the Centre is voluntary and the patients are expected to pay if they have the means. Many are subsidized by their employers. A survey of the results has shown that 84 per cent of the patients discharged have returned to normal industrial employment.

Psittacosis in Domestic Fowls

Outbreak of Psittacosis (Ornithosis) from Working with Turkeys or Chickens, by J. V. Irons, Thelma D. Sullivan and Joyce Rowen. The American Journal of Public Health, 41:931-937 (August 1951).

PSITTACOSIS is an infection which is rather common in a number of birds. It has been most commonly transmitted to men in the United States by parakeets and pigeons although canaries, chickens and ducks have also been responsible for infections in humans.

The series of cases with which this report is concerned occurred in a Texas plant engaged in the dressing of turkeys and chickens. Among a total crew of 78 there were 22 cases with three deaths. The severity of the cases varied from the three fatalities to a number of cases which were not ill but were found later by serum tests.

All of the affected individuals had handled turkeys and some had also handled chickens. Because of the nature of the epidemic, all cases occurring between October 29 and November 8, and the fact that all of those affected had been handling turkeys, it is thought that the cases acquired their infections from a single infected flock of turkeys. There was no evidence that any sick turkeys were handled but the infection is often inapparent in birds. Well over half of the employees who handled turkeys were ill and an additional eight showed serological evidence of having been exposed to the infection without having become ill.

The disease in these cases was characterized by chilly sensations, general feeling of illness, nausea and vomiting at the onset, followed by high fever. The respiratory symptoms were not correlated with the severity of the illness and were frequently absent in the beginning. There was some evidence that penicillin was useful in the treatment. The families of the persons who were ill were investigated but there was no evidence that any of them acquired the infection. Convalescence of the seriously ill persons was generally quite slow; more than half of the cases were ill for two weeks or more.

Dust from Drilling

Size of Cuttings Produced by Pneumatic Drilling with Different Kinds of Detachable Bits, by Carlton E. Brown. The Archives of Industrial Hygiene and Occupational Medicine, 4:103-118 (August 1951).

SINCE DRILLING is one of the most dusty operations in mining this investigation was undertaken to determine the amount of dust smaller than three microns in diameter which was produced by wet drilling with four different types of detachable drill bits used on an automatic stoper and by drilling into a monazite rock containing about 23 per cent of quartz, as determined by X-ray diffraction studies.

The collected sludge was divided into size ranges both by dry sieving and by wet sieving. The particle sizes in the material going through the finest sieve was

—To page 75

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The Safety Library

Books, Pamphlets and Periodicals of Interest to Safety Men

BOOKS AND PAMPHLETS

Safety and the Foreman

Safety and the Foreman. By John M. Roche, safety director, Sixth Army Command. Published by the National Foremen's Institute, New London, Conn., 1951. 197 pages. Price $3.00.

Written when Mr. Roche was manager of the Industrial Department of the National Safety Council, *Safety and the Foreman* is an excellent summary of industrial safety and its meaning to the supervisory staff.

The first half of the book deals with the reasons for accident prevention work in industry, the basic elements of safety organization, and the removal of unsafe conditions and the control of unsafe acts, and with accident records.

Part II gives fourteen "Practical Pointers" to the foreman—common elements of the injury problem and ways in which the foreman can deal with them.

Mr. Roche has necessarily been superficial in his treatment of some parts of his subject, particularly of the psychology of safety aspects of the book. The book is frankly a brief treatment of a large subject.

However the book's very limitations may be thought of as assets, particularly for the foreman reader who wants to get the fundamentals of safety in quick form.

The book is fluent and readable without being flippantly vernacular, yet it succeeds in getting quickly to the heart of the topic at hand.

Safety and the Foreman reflects the author's lifelong familiarity with problems of safety philosophy, safety administration, and safety engineering. It is probably as brilliantly written and compact a treatment of the subject as can be found in any comparable number of pages. —*Kent W. Francis*

Aeronautics

Resume of U. S. Air Carriers Accidents (Calendar year 1950.) Published by Civil Aeronautics Board, Washington 25, D. C. 1951. 23 p. Free.

Atmospheric Pollution

Air Pollution Abatement Manual. Chapter I, Introduction, 5 p; Chapter III, Community Relations, 7 p. Published by Manufacturing Chemists Association, 246 Woodward Bldg., Washington 5, D. C. 1951. Price 25c each. The first of a series of 13 chapters to be issued in the next 12 months.

Clay Products

Injuries and Accident Causes in the Manufacture of Clay Construction Products. Published by U. S. Bureau of Labor Statistics. 1951, 49 p. For sale by the Superintendent of Documents, Washington 25, D. C. Price 30c. (Bulletin No. 1023.)

Fire Protection

An Investigation of Large Electric Motors and Generators of the Explosion-Proof Type for Hazardous Locations, Class I, Group D. Published by Underwriters Laboratories, 207 East Ohio St., Chicago 11. 1951, 45 p. Free.

First Aid

First Aid and Safety-Training Guide. Published by American Petroleum Institute, 50 West 58th St., New York. 1951. 64 p. Price $1.00.

Hospitals

Hospital Operative Rooms. Recommended Safe Practices. Published by National Board of Fire Underwriters, 85 John St., New York 38. 1951. 29 p. Free. (NBFU Pamphlet No. 56.)

Marine Industry

Operation of Marine Terminals. Published by National Board of Fire Underwriters, 85 John St., New York 28. 1951. 19 p. Free. (NBFU Pamphlet No. 307.)

Mines

Analysis of Haulage Fatalities in Bituminous-Coal Mines in 1950. Published by U. S. Bureau of Mines, Publication Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. 1951, 28 p. Free. (Information Circular 7604.)

Petroleum Industry

Review of Fatalities in the Petroleum Industry for 1950. Published by American Petroleum Institute, 50 West 50th St., New York 20. 1951. 12 p. Free.

Wood Products Industry

Retail Lumber Yards and Lumber Storage Yards. Standards of NBFU. Published by National Board of Fire Underwriters, 85 John St., New York 38. 1951, 7 p. Free. (NBFU Pamphlet No. 47.)

MAGAZINE ARTICLES

Beryllium

Epidemiology of Beryllium Intoxication by James H. Sterner and Merril Eisenbud. (In A.M.A. Archives of Industrial Hygiene and Occupational Medicine, August 1951, p. 123.)

Civil Defense

Defense Is Everybody's Business, by Edith M. Beattie. (In American Journal of Nursing. September 1951, p. 550.)

Fire Protection

Ten Ways to Prevent Flash Fires from Leaks in Hydraulic Fluid Power Systems, by Ransom Tyler. (In Factory Management and Maintenance. Sept. 1951, p. 138.)

Foremen

Basics of Supervision, by H. W. Heinrich. (In Supervision. Sept. 1951, p. 19.)

—*To page 74*

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Safety Library

—From page 72

Health

Clinical Operations on the Toxicology of Boron Hydrides. By H.M. Rosendaal (In A.M.A. Archives of Industrial Hygiene and Occupational Medicine, September 1951, p. 257.)

Generation of Phosgene During Operation of Trichloroethylene Degreaser. By Louis W. Spolyar and others. (In A.M.A. Archives of Industrial Hygiene and Occupational Medicine, August 1951, p. 156.)

Methyl Bromide Fumigation and Control in the Date-Packing Industry. By Fred R. Ingram. (In A.M.A. Archives of Industrial Hygiene and Occupational Medicine, September 1951, p. 193.)

Occupational Causes and other Health Hazards in a Chromate Plant. A Medical Appraisal. II. Clinical and Toxicologic Aspects. By T. F. Mancuso. (In Industrial Medicine and Surgery, September 1951, p. 393.)

Toxicology of Two Butoxypoly Propylene Glycol Fly Repellents. By Charles P. Carpenter and others. (In A.M.A. Archives of Industrial Hygiene and Occupational Medicine, September 1951, p. 261.)

Hospitals

Accident Control for Nursing Personnel. By Bernard J. Kesner. (In American Journal of Nursing, September 1951, p. 565.)

Railroads

Frisco's Safety Program Gets Results. (In Modern Railroads, September 1951, p. 33.)

Katy Cuts Reportable Injuries 43%. (In Modern Railroads, August 1951, p. 95.)

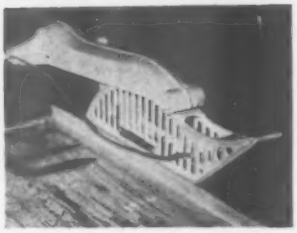
Training

Train Your Fork Truck Operators. Here's How. By W. B. Edison (In Modern Materials Handling, September 1951, p. 36.)

Wire Rope

Wire Rope—How It's Made, How to Take Care of It. By Charles M. Haas. (In Mining Engineer. September 1951, p. 772.)

Lighted Saw Guard



One of the objections sometimes made to the use of a saw guard is that the operator can't see his "cut." To overcome this problem, Bill Cozart, maintenance foreman at the Nashville plant of Ralston Purina Company, cut a window in the top of a standard saw guard and covered it with a piece of flexible replaceable plastic.

To make the guard more useable, he mounted two 6-volt lamps in the toe of the guard so they would light the cutting surface. The lights are connected to a small transformer under the table and operate on the same switch that controls the saw.

Sprinkler Protection

—From page 64

head installed in a standard threaded tee fitting midway in the length of pipe. The standard riser unit would be a 10 foot length of 4 inch pipe with two 1½ inch stubs, opposite one another midway in the piece of pipe. Adjustable hangers would be provided. Caps for the ends of lines and an inspector's test valve assembly would also be provided.

A utilized outside valve house which would be its own shipping container and equipped with permanent hooks for lifting would contain a completely assembled dry pipe valve, an air compressor, an electrical heater, an alarm device and a fire department siamese connection. A vane type water flow detector would be installed so that the system could be used wet if desired. It would be necessary to bring to the valve house an electrical circuit and a frost free water supply. Provision would be made for connection to any available central supervisory service or for alarm at a remote point.

The system is designed basically for installation in an area 100 × 100 with a central riser. Branch lines consisting of five of the 1½ inch by 10 foot branch pipe lengths would be attached to the riser on each side at 10 foot intervals.

It is realized that this ideal situation will seldom be found, however, modification to suit the layout of a particular building could easily be made. For instance, a long narrow building would require more lengths of 4 inch riser while the branch lines might be reduced to three units on each side of the riser. Adaptations could easily be made to suit irregularly shaped buildings. Areas in excess of 10,000 square feet would require additional systems. (In the absence of qualified local sprinkler personnel, any pipe fitting personnel would install the system from rough field layout sketches made by the fire protection engineer and if necessary under his supervision.)

It is fully realized that there may be for instance some locations where a sprinkler head is somewhat more than the permissible distance in the code from a side wall or partition. A portion of the variations from the code can be absorbed by the factors of safety built into the code, the balance assumes a "calculated risk" premised upon the fact that a sprinkler system *in being* which meets 90 per cent of the code standards is infinitely superior to a sprinkler system, the plans for which have not yet been drawn. Where it is fully intended to provide permanent protection and steps are actually taken to do so, a temporary system could be installed until the permanent system is in place.

Industrial Health

—From page 70

determined by microscopic measurement. They were also determined by extrapolation of the particle sizes determined by sieving. The results of both methods indicated that there was little difference in the amount of fine dust produced by the different designs of rock bits.

The percentage of weight of

Which PYRENE do you need?

This is a time for us to *protect what we have.* Are you on guard against a fire emergency? Good idea—call your Pyrene* jobber. Have him check your present fire extinguishers and your extinguisher needs. You can be sure he'll recommend the right extinguishers for your fire hazards—because there's a Pyrene for *every* fire hazard!

*T.M. Reg. U.S. Pat. Off

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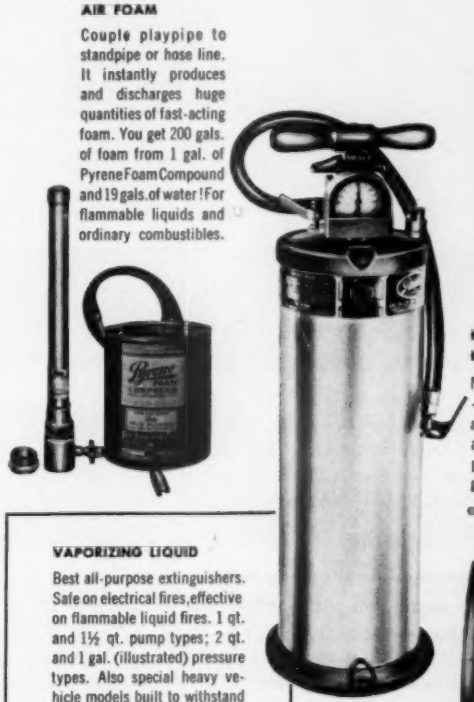
Couple playpipe to standpipe or hose line. It instantly produces and discharges huge quantities of fast-acting foam. You get 200 gals. of foam from 1 gal. of Pyrene Foam Compound and 19 gals. of water! For flammable liquids and ordinary combustibles.



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Also stainless steel or seamless copper soda-acid type, copper or steel pump tanks, recharges, manual and automatic fire-fighting systems.

CHEMICAL FOAM

2½ gal. size produces about 22 gals. of fast-acting foam. Ideal for flammable liquid and ordinary combustible hazards. Seamless copper or stainless steel shell. Also available in 40 gal. wheeled units, as illustrated.

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1 **It protects against slips and falls.**
2 **It keeps doing this vital safety job for the life of the building.**

Reason? Feralun consists of a special cast iron matrix with a diamond-hard abrasive imbedded in the walking surface. Gripping action is provided by the abrasive, not by the scoring or indentations in the metal. ● Get the full story on Feralun. Find out why millions of feet of this long-lasting anti-slip flooring are now in use.

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these fine particles, as determined by extrapolation of the sieving data, ranged from 0.065 to 1.7. The percentage by number of the fine particles ranged from 80 to 90.

Air Pollution

Canada and United States Cooperate on Air Polution Study. Anonymous. Industrial Health Monthly of the Division of Industrial Hygiene, U. S. Public Health Service, 11:135 (September 1951).

AN INTERNATIONAL STUDY has been undertaken to determine the effect upon the air contamination in the Detroit-Windsor area of the smoke produced by river boats in the Detroit River. The study is under the supervision of the International Joint Commission which has set up an International Advisory Board on Air Pollution and developed a mobile laboratory for doing the necessary field studies.

In addition to determining the density of the smoke emitted by the boats it is proposed to determine the smoke emission of all of the other major sources of air pollution in the area and to determine the sulfur dioxide content of flue gases emitted in the area. Other objects of the survey are:

Determination of the sources, natures and amounts of the atmospheric contaminants released by industrial processes.

Determination of the effects of local meteorological conditions upon dissemination and diffusion of atmospheric contaminants.

Determination of the effects of the contaminants upon health, safety, vegetation and economy.

Determination of the controls necessary, their cost and who should bear the cost.

On the Canadian side of the border a staff of four chemists and chemical engineers and a secretary has been employed for the survey and a laboratory and four continuous field test stations have been set up. On the United States side two engineers, a chemist and a secretary have been employed and the mobile laboratory has been constructed.

In addition to these full time employees on the project there are a number of individuals from the

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Congress Loot

—*From page 29*

with the top bottle far off center. So I bought a turn, threw one ball, and flattened the whole setup. That won me the teddy bear, and we carried it back to the Stevens in triumph.

That night I remembered an upcoming safety meeting in the warehouse, for which I've been casting around for an angle to dramatize. I realized that my victory at the carnival was the product, not of my skill, but of bad material piling. Out of that, obviously, came an angle for the talk, requiring, as proof of my point, the presence of the teddy bear.

Now Junior has it, but maybe I can pry it away from him next Thursday to take to the meeting.

Sue showed a proper wifely detective's interest in the assortment of paper match books that littered the bottom of the suitcase. This is one year they pass examination—no girl-show joints, nothing but hotel, safety appliance, and respectable restaurant advertising.

The other suitcase had, beside slippers, bathrobe, aspirin and shaving kit, only my annual bottle of non-slip floor wax (this bottle gets used at home) and a heavy load of assorted papers. Most of them are brochures—selective as I am, I still wanted to bring home a good dozen. Then there were mimeographed copies of two or three papers which had been made available by considerate speakers.

There was a most battered and dogeared copy of the Congress program. There was a sectional roster, a list of the newly elected Council officers, and, finally, my own big notebook, packed with names, addresses, technical and stunt ideas, assorted doodling, a few rough sketches made of a particularly interesting hoisting demonstration. That was all, except for that most important list of my expenses, and one note reading.

"Call Joe *sure* Thursday AM early."

One of these days I'll remember who Joe was and what I was supposed to call him about.

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Frictionless
MAGNET CHAINS

DO MORE WORK, LAST LONGER,

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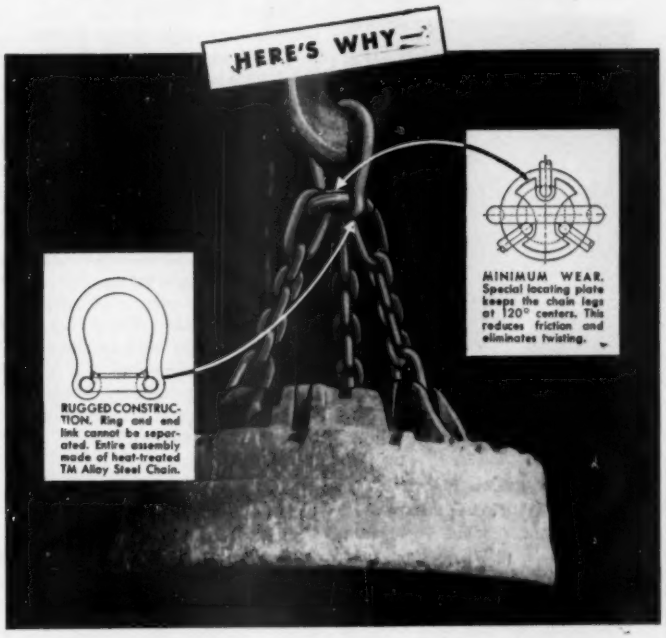
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RUGGED CONSTRUCTION. Ring and end link cannot be separated. Entire assembly made of heat-treated TM Alloy Steel Chain.
MINIMUM WEAR. Special locating plate keeps the chain legs at 120° centers. This reduces friction and eliminates twisting.

Extensive on-the-job tests prove TM Alloy Steel Downtown Magnet Chains superior to any other three-leg assemblies on the market. Patented design of end link and horizontal ring with special locating plate keep chain legs at 120° centers. This prevents ganging-up, excessive friction and twisting . . . assures level lifts and even distribution of load weights. Additional long life, safety and economy is assured by Heat-Treated TM Alloy Steel Construction. High tensile strength, great resistance to abrasion, grain growth and shock at sub-zero temperatures are only a few of the TM Alloy Steel qualities. Send coupon today for details!

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A GREAT NAME IN
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Personals

Stennett Heads ASSE

J. C. STENNETT, director of safety engineering, National Association of Mutual Casualty Companies, was elected president of the American Society of Safety Engineers for 1951-52 at the annual meeting held in Chicago October 9.

J. C. Stennett

Other officers elected are:

First Vice-President—C. H. Weiser, plant personnel supervisor, Southwestern Bell Telephone Company, Kansas City, Mo.

Second Vice-President—W. F. Brown, safety director, Consolidated Edison Company of New York, New York.

Secretary—A. D. Caddell, Chicago.

Treasurer—J. L. Ridinger, safety director, Inland Steel Company, Chicago.

The following were elected members-at-large of the Executive Committee for three-year terms:

W. N. Cox, Jr., head, Safety Engineering Department, Georgia Institute of Technology, Atlanta, Ga.

W. E. Montgomery, safety engineer, K. D. S. Robertson, Ltd., Montreal, Quebec.

A. R. Rommel, assistant chief safety engineer, Humble Oil and Refining Company, Houston, Tex.

James H. Fitch, director of personnel for Neil Machine and Engineering Company, Akron, Ohio, was elected to fill a vacancy for a term ending 1953.

PHILIP J. BAILEY has been named safety engineer for Walter Kidde & Company, Inc., Belleville, N. J. He will direct the company's industrial safety program.

For the past 10 years, Mr. Bailey has been employed by Ruberoid Company, Gloucester City, N. J., as personnel and safety supervisor.

In 1949 he was named by Governor Alfred E. Driscoll as a member of the Committee on Education for the Governor's Industrial Safety Conference. For the past five years he has been on the national safety committee for the asphalt roofing industry bureau. He is a member of the American Society of Safety Engineers.

ALVAH SMALL, vice-chairman of Underwriters' Laboratories, Inc., has retired from that organization after 45 years' service.

Mr. Small was born in South Portland, Maine, where he attended grade and high school. He graduated from the University of Maine in 1904 with a B.S. degree in Civil Engineering. Later he obtained a C.E. degree. After working as an inspector for the New York Insurance Exchange for two years, he joined the staff of Underwriters' Laboratories as assistant engineer in the Electrical Department. In 1908 he was made a special agent, calling on inspection authorities throughout the United States. In 1910 he was placed in charge of the factory inspection service and did much to develop this phase of Underwriters' Laboratories work. He became vice-president in 1916 and for a number of years was in charge of the Laboratories' New York Office and testing station.

Mr. Small was elected president of the Laboratories in 1935 and then transferred his office to the main testing station and headquarters offices at Chicago. In 1948, he was elected vice-chairman. He has been active in the work of the American Standards Association, the National Fire Protection, National Board of Fire Underwriters and other organizations engaged in safety and fire protection. He was cited for valued service during World War II.

O. GRESSENS, vice-president for finance and treasurer of National Safety Council, has resigned as vice-president and controller of Commonwealth Edison Company, Chicago, to become financial vice-president of Peabody Coal Company.

A graduate of the University of Illinois, class of 1921, Mr. Gressens received his Ph. D. in 1927 and since has been associated with Commonwealth Edison Company and Public Service Company of Northern Illinois. He was elected vice-president and treasurer of the National Safety Council in 1947.

CAPT. FREDERICK D. REYNOLDS, formerly director of industrial relations, Commander Mill, Inc., Sand Springs, Okla., has been assigned director of ground safety for the Ninth Air Force at Pope Air Force Base, North Carolina.

Previous to his assignment Captain Reynolds was director of ground safety for the Caribbean Air Command, 1949 to 1950. During the early part of this year he was vice-chairman of the Federal Interdepartmental Safety Council of the Canal Zone. He is an associate member of the American Society of Safety Engineers.

THOMAS R. LEMASTER has been appointed supervisor of safety and welfare for Kentucky West Virginia Gas Company. His office will be located at the Company's

Prestonsburg, Kentucky, field headquarters.

Mr. Lemaster entered the employ of Kentucky West Virginia Gas Company as a welder's helper in 1941 and was promoted to welder in 1946, working in this capacity until 1950, when he was promoted to maintenance and material foreman at the Prestonsburg Service Building, which position he held at the time of his present appointment.

Mr. Lemaster served in World War II with the Army Ordnance Department and was overseas from 1943 through 1945.

Obituary

EDWIN L. HETTINGER

EDWIN L. HETTINGER, for more than 30 years director of optical research at Willson Products, Inc., Reading, Pa., died September 2 at the age of 72. He has been associated with the firm for 38 years.

Mr. Hettinger was one of the pioneers in the development of the modern safety goggle through his work on the now-universal process of heat-treating glass to increase impact resistance. In addition, he contributed to research on glass formulas providing cut-off of ultraviolet and infrared rays that resulted in the development of protective tinted glass for welders and others exposed to harmful radiant energy.

Mr. Hettinger was a fellow in the American Ceramic Society, and a member of the American Chemical Society, the American Standards Association, the American Society for Testing Materials, the Optical Society of America, the Sun Glass Institute, and the British Society of Glass Technology. He was a frequent contributor to technical journals of the glass and ceramic industry.

Mr. Hettinger had a broad interest in Reading civic affairs. He served on the school board for 14 years, 6 of them as president. He was one of the founders of the Pennsylvania College of Optometry, and active in the Reading Chemists Club.

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dotes on this floor,
It drains so fast
with ease.
And dirt can't stick
on Multigrip
So sweeping up's
a breeze!"

U·S·S MULTIGRIP FLOOR PLATE has no pockets in which dirt, grease and water can accumulate. All side faces of the lozenge-shaped risers are sloping so that dirt can be brushed or hosed away with ease. Drainage is complete and immediate in any direction.

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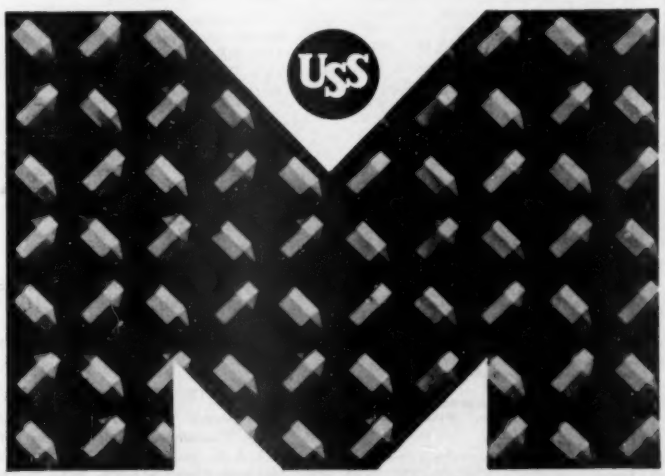
United States Steel Supply Company, Warehouse Distributors, Coast-to-Coast



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COMING EVENTS

In the Field of Safety

Nov. 2, Cincinnati

First Annual Greater Cincinnati Safety Conference. (Netherland Plaza Hotel). Kenneth R. Miller, coordinator, Greater Cincinnati Safety Council, 1203 Federal Reserve Bank Bldg., 4th & Race Sts., Cincinnati.

Nov. 16, Fort Worth, Tex.

Seventh Annual Industrial Institute. (Hotel Texas). L. W. Graff, safety director, Fort Worth Safety Council, Majestic Bldg., Fort Worth 2, Tex.

Dec. 3-4, Baton Rouge, La.

Louisiana Safety Association, Annual Conference. (Louisiana State University). Charles E. Doerler, secretary, P. O. Box 806, Shreveport, La.

Jan. 21-24, Houston, Tex.

American Roadbuilders Association, Annual Meeting. Eugene Reybold, executive vice-president, International Building, Washington 4, D. C.

Mar. 2-4, Atlanta, Ga.

Thirteenth Annual Southern Safety Conference and Exposition. (Biltmore Hotel). Braxton B. Carr, executive director, Southern Safety Conference, 2120 First Ave. North, Birmingham 3, Ala.

Mar. 17-18, Boston

Thirty-first Annual Massachusetts Safety Conference and Exposition. (Hotel Statler). Edgar F. Copell, president, Massachusetts Safety Council, 31 State St., Boston.

Apr. 1-4, New York

Twenty-second Annual Convention, Greater New York Safety Council. (Hotel Statler). Paul F. Stricker, executive vice-president, 60 E. 42nd St., New York 17, N. Y.

Apr. 7-10, Detroit, Mich.

Twenty-second Annual Meeting, Michigan Safety Conference. (Hotel Statler). Frederick W. Krupp, executive secretary, 174 East Atwater Street, Detroit, 26, Mich.

Apr. 16-18, Charleston, W. Va.

Eighteenth Annual West Virginia Safety Conference. (Daniel Boone Hotel). E. G. Volz, general chairman, c/o Monsanto Chemical Corp., Nitro, W. Va.

May 4-6, Asheville, N. C.

Twenty-second Annual North Carolina State-wide Industrial Safety Conference. (George Vanderbilt Hotel). H. S. Baucom, safety director, North Carolina Industrial Commission, Raleigh, N. C.

May 6, Easton, Pa.

Twenty-fifth Annual Eastern Pennsylvania Safety Conference. Hotel Easton. Harry C. Woods, executive secretary, Lehigh Valley Safety Council, 602 E. Third St., Bethlehem, Pa.

May 8-9, Baltimore, Md.

Statewide Safety-Health Conference and Exhibit. (Lord Baltimore Hotel). Joseph A. Haller, director of safety, State Industrial Accident Commission, Equitable Bldg., Baltimore 2, Md.

May 15-17, Richmond, Va.

Eighteenth Annual Virginia State-Wide Safety Conference. (Jefferson Hotel). William M. Myers, executive secretary, Richmond Safety Council, 803½ E. Main St., Richmond 19, Va.

Keep Learning

—From page 56

taining to operations, or affecting personnel in general.

4. Instituting and maintaining procedure through which instructions and information on accidents and costs may be given to foremen and supervisors so that they are better qualified to carry out the safety policy of the organization.

5. Enlisting full and enthusiastic cooperation of supervisors and workers through issuance of decisive and practical policies and the demonstration of personal interest in safety by proper instruction.

6. A higher degree of morale and efficiency by constant improvement of human relations between them and management.

7. Encouragement of an aggressive personal interest in safety by the individual worker through a program which calls for his active participation.

8. Limiting work load of supervisory personnel to a reasonable amount so that the safety program will not be placed in a subsidiary role to production and maintenance problems.

9. Installation and maintenance of safety devices in keeping with the technological progress of the industry.

Personal interest of top management should be made evident in line supervisory personnel. As evidence of the safety policy, job planning should incorporate safe working procedures and thorough training of all personnel.

It is also of vital importance that full cooperation of employees be secured and their confidence established. When employees are

approached at their own level on company safety policies and procedures, the knowledge of their working conditions and their current thinking on safety matters, this is a principal method of fostering cooperation.

After an engineer has established himself to a point where he is conversant with all supervisors in line and staff positions in the management organization he has an excellent opportunity to secure the necessary information for development of an over-all program.

The purchasing agent should be made aware of the importance of purchasing completely guarded equipment. This may eliminate the need of corrective guarding by the maintenance department when the equipment is installed. He should also have knowledge of modern material handling equipment such as trucks, cranes and hoists, approved personal protective equipment and safety materials that he may be required to purchase. The engineer can aid and considerably benefit by supplying the purchasing agent with up-to-date information on safe and efficient protective equipment.

With loss control programs becoming more and more complicated, and with safety engineering rapidly advancing to the level of other engineering professions, the engineer should not overlook plant engineering as a medium for advancement toward his objective.

This is the department where many safety proposals may be pigeon-holed due to a lack of understanding of the problem and other reasons. It is rather surprising in many industries how small a part plant engineering has played in loss prevention programs and the scarcity of technical safety data available in these departments.

In many organizations one of the hardest nuts to crack is of course, the maintenance department. Often this department has not been enlarged to take care of increased operations and in other cases the maintenance force has been too small or has been directed by incompetent personnel. There are still many plants that operate on a breakdown maintenance procedure, where top management has

FEATURE FOR FEATURE...

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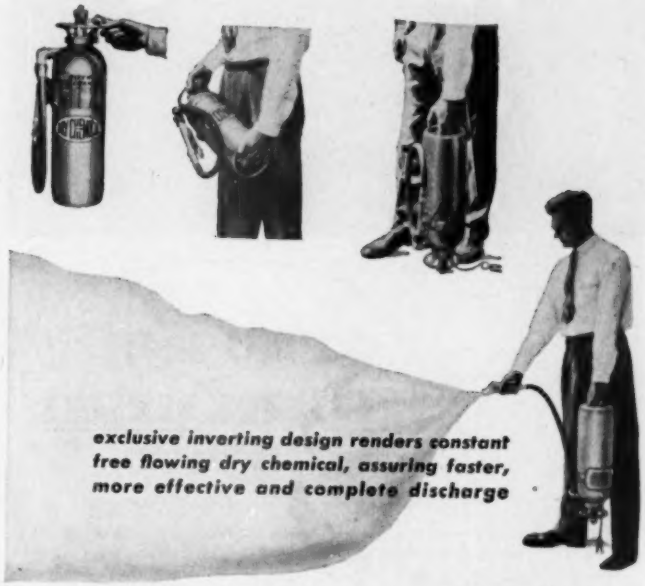

exclusive inverting design renders constant free flowing dry chemical, assuring faster, more effective and complete discharge

These fast, positive fire killers are easy to operate, compact, well-balanced and offer extensive maneuverability indoors or outdoors . . . no extra gadgets protruding or complicated operating parts. The outstanding mechanical breakage feature of C-O-TWO Dry Chemical Type Fire Extinguishers, plus continuous inert gas pressured agitation or fluffing, together with a skillfully blended free flowing dry chemical, guarantee lasting, foolproof fire protection. All sizes are rechargeable on-the-scene by anyone . . . no special tools required.

C-O-TWO Dry Chemical is a finely pulverized powder . . . non-conducting, non-corrosive, non-abrasive, non-freezing and non-toxic . . . special compound consists of sodium bicarbonate and other chemicals skillfully blended to render high fire extinguishing qualities, remain free flowing while being used and withstand long periods of storage without deterioration. When brought into contact with fire, C-O-TWO Dry Chemical absorbs a greater part of the heat, decomposes and releases fire killing gases. This heat absorption process acts as an insulating screen between the fire and the fire fighter.

Fully approved and built to rigid specifications . . . C-O-TWO Dry Chemical Type Fire Extinguishers are exceedingly effective on flammable liquid, gas and electrical fires, as well as surface fires involving ordinary combustible materials . . . rated by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories for class B and C fires.

Convenient 4, 20 and 30 pound hand sizes . . . no syphon tubes or valves within the cylinder to become clogged or inoperative . . . discharge hose and squeeze type discharge nozzle remain empty until actuation takes place . . . one piece removable top assembly.

Also, convenient 150 pound wheeled size . . . sturdy, wide-faced wheels . . . discharge hose and two position discharge nozzle having soft or solid stream fully enclosed in protection casing . . . footrail and dual bar handle provide easy inverting.

Act now for complete free information on these top quality fire extinguishers. Remember . . . you can't put fire off . . . fire doesn't wait. Get all the pertinent facts . . . write today!

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NEWARK 1 • NEW JERSEY

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Squeez-Grip Carbon Dioxide Type Fire Extinguishers • Dry Chemical Type Fire Extinguishers
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
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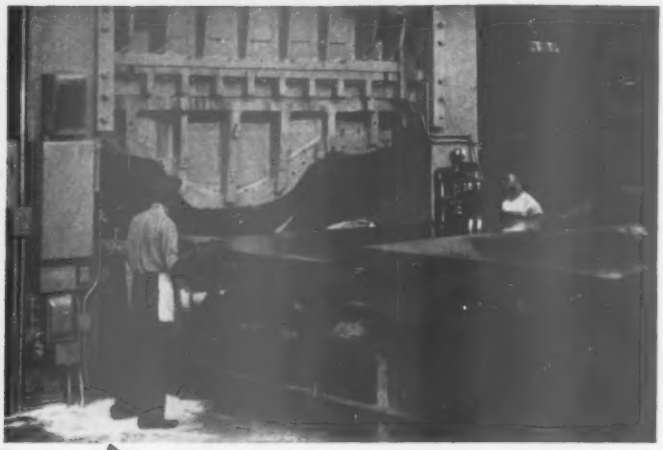

THIS SPOT
ABSORBS DANGER!

That small spot is important to you. It's your protection against two of the most common industrial dangers—falls and fires resulting from waste oils, paints and other liquids.

The light spot is Wyandotte Zorball—the all-purpose floor absorbent that quickly removes these hazards. Just spread Zorball on the floor and immediately you have a safe, non-skid surface. Just sweep up the oil-soaked Zorball and immediately you have removed the danger of having these hazardous wastes cause fire.

Unlike any competitive floor absorbents, Zorball always maintains its original form! Even when saturated! Zorball never cakes, packs or forms "mud." Ask your Wyandotte Representative to demonstrate Zorball, the safest floor absorbent.

P.S.—If you're having any type of cleaning problem, consult Wyandotte for free technical information and service.

"Cleaning the World"

WYANDOTTE
ZORBALL

- *removes oils immediately*
- *gives lasting protection against fires*
- *is safe and economical*
- *harmless to wood, skin, metal, rubber*
- *will not break down and form "mud"*
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THE WYANDOTTE LINE—products for burnishing and burring, vat, electro, steam gun, washing machine and emulsion cleaning, paint stripping, acid pickling, related surface treatments and spray-booth compounds. An all-purpose floor absorbent: Zorball. In fact, specialized products for every cleaning need.

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not recognized the need of putting plant maintenance in a much more important position in the operation pattern. Preventive maintenance is today a necessity in industry; without it, it is questionable whether a loss control program can succeed. Good plant maintenance includes carefully developed programs of periodic equipment inspection, testing, lubrication, equipment overhauling and quick completion of repairs and safety recommendations. There should also be written work orders, a stock of equipment replacement parts and adequate safe material handling equipment for emergency and regular repair work.

As the safety department operates in an advisory position only, safety engineers should not be required to inspect equipment on a periodic basis. This is a function of the maintenance department. Of course, spot checking at intervals by the engineer is advisable.

Where the safety engineer is in a staff position directly under the production supervisor or works manager he has a better opportunity of success. In this position he can work much closer with both line and staff supervisors.

Many seasoned safety engineers have done considerable work in making full studies of management organization and the results, in many cases, indicate that commendable progress has been made where loss control was incorporated as a top management policy.

There is much evidence that new blood is infiltrating into top management of many industries. This personnel is considerably more receptive toward organizing loss prevention programs which gives the safety engineer an excellent opportunity to present logical and practical proposals.

Industrial Health

—From page 76

State of Michigan and City of Detroit staffs working and a considerable number of industries in the area have personnel assigned to the problem of air pollution in the area. One industry in the area now has three men employed full

time on the study of its own air pollution problem.

Medical Care Plans

The UAW-CIO and the Problem of Medical Care, Harry Becker. The American Journal of Public Health, 41:1112-1117 (September, 1951).

Since 1948 organized labor has been giving a priority in collective bargaining agreements to medical care plans second only to that being given to pension plans. This type of plan is no longer considered a "fringe" benefit but is considered by the labor organization as one of its major responsibilities and objectives in providing for increased security for workers.

The worker's medical care problem is quite simply stated; he simply wants access to competent medical care when he is sick. It is not so simply supplied because the financing of comprehensive schemes for large numbers of people is an expensive project. For greatest efficiency group practice is required and with more equipment per physician than is now generally available.

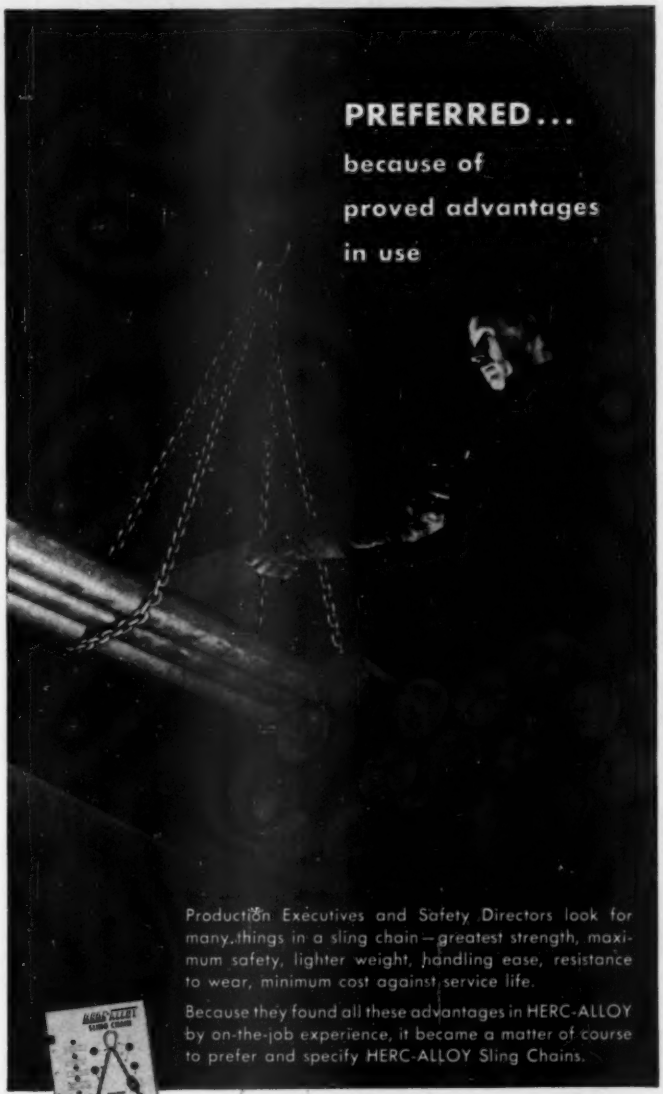
Organized labor is not satisfied with the programs which have been offered by the commercial insurance companies. Partly because the amount of premiums returned in benefits has not been sufficiently high. But more because the insurance companies have been forced, to protect their rate structures, to confine themselves generally to money benefits in specific amounts and for a limited number of conditions.

The Blue Shield plans have generally had the same limitations as the insurance company plans but they are thought to be inherently more flexible. To develop in the direction of providing more comprehensive coverage they will have to move away from the provision of cash benefits and in the direction of providing specified medical services, which is not fundamentally inflationary.

As more and more medical services are provided under collective bargaining agreements a larger proportion of the national production is going to have to be put into medical services and we are going to have to provide both

—*To page 90*

HERC-ALLOY
SLING CHAINS



Production Executives and Safety Directors look for many things in a sling chain—greatest strength, maximum safety, lighter weight, handling ease, resistance to wear, minimum cost against service life.

Because they found all these advantages in HERC-ALLOY by on-the-job experience, it became a matter of course to prefer and specify HERC-ALLOY Sling Chains.

Write for illustrated Data Book No. 3 which contains helpful information on sling chain selection and use.

COLUMBUS McKINNON CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corp.)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
District Offices: New York • Chicago • Cleveland
Other Factories at Angola, N. Y., Dixon, Ill., St. Catharines, Ont., Can., and Johannesburg, South Africa.

Protect your employees' health
As collection efficiency goes up employees' hazards and maintenance costs go down with the
AEROTEC
INTEGRAL
DUST COLLECTOR

(*Above*) Exhaust from this Aerotec Integral, connected to automatic precision grinding machine, is returned clean to the room. Conveying velocity is 4500 fpm. This is one of many Aerotec applications at the Winchester Repeating Arms Company, Division of Olin Industries, Inc., in Connecticut.

(*Right*) Note the compact arrangement of elements in the Aerotec Integral Collector. As this cutaway view shows, the large cyclone, for collecting larger dusts, has an outlet leading to a series of highly efficient, small diameter tubes, for the finer dusts.

- **Self-cleaning tube design – No filters to plug**
- **Trouble-free operation – No moving parts to fail**

Combatting the hazards of industrial dust with the Aerotec Integral Collector is good insurance against loss of productivity in your plant. You safeguard the health of your workers and eliminate the danger of explosion from high dust concentrations. In addition, you protect machinery and equipment in your plant from excessive wear or corrosion caused by abrasive or corrosive dusts. Efficiency goes up; maintenance costs down.

The Aerotec Integral Collector controls dangerous dusts at their source with a higher constant collecting efficiency than conventional impingement types, over a wide range of flow rates. There are no filters to plug or liquids to watch. This unit delivers constant suction at the hood. It operates for long, maintenance-free periods, requiring only periodic emptying of the spacious dust bin.

To meet increasing government demands for high production schedules, plant engineers in heavy industrial sections of the nation are ordering more and more Aerotec Integral Collectors. It is an ideal way to assure clean, healthful surroundings that pay off in high output and worker satisfaction. To determine just the right type of equipment for *your* particular dust collection problem, call or write today.

Project Engineers

THE THERMIX CORPORATION

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(Offices in 28 Principal Cities)

Canadian Affiliates: T. C. CHOWN, LTD., *Montreal 25, Quebec ; Toronto 3, Ontario*

THE AEROTEC CORPORATION

GREENWICH, CONN.

Safety Manual

—From page 35

text type have no glare and are most restful to the eye. They also withstand rough handling. If photographs are to be used, enameled or coated papers will reproduce the half tones best. Line drawings or sketches reproduce well on uncoated paper. A solution used by some companies is to print the text on offset paper and to print pages of photographs on coated stock.

The weight of the paper will depend on whether or not it is coated and on the size and number of pages. For a small page size or a large number of pages, a lightweight paper (20 to 30 pounds) can be used. For a larger page size or few pages, a heavier paper stock (50 to 80 pounds) is suitable.

Indexing and Paragraph Identification

Important but often slighted items in manuals are the index, the table of contents, and identification of paragraphs or rules.

An index is the locator system of the manual. The better the index, the faster the reader can find what he is looking for. The index is usually put at the back of the book, although some prefer to have a separate index at the beginning of each section.

The table of contents outlines the main topics. Some manuals, in addition to the table of contents, use a tab system for location of the main topics.

If the manual will be referred to often, paragraphs or rules should be identified in some way. A common method is to number each paragraph heading and to use letter and number suffixes or a decimal system for sections of paragraphs. The use of bold type on headings, numbers and additional spacing between paragraphs will make for easy identification. Further emphasis can be gained by putting the numbers and suffixes in the margin and using proper indentions.

Illustrations

The chief way of breaking up the textbook appearance of a man-

ual and making it attractive and interesting is to use illustrations. Pictures can often tell a story or create an impression which words cannot adequately handle. As a general rule, it is best to show illustrations of what is correct rather than what is wrong.

Photographs are popular for illustrating manuals, because they lend a touch of realism that cannot be obtained in any other way. Photographs should include human interest wherever possible.

To be effective, photographs should illustrate specific points. People and equipment should be shown as they would be in normal operations. The setup should be correct, because the value of the picture will be lost entirely if it shows something that is not normal to the operation. The picture should be considered in terms of the size it will be in the reproduction, and the photographs should not show too much. To clarify a point, it is legitimate and proper to retouch a negative or to paint an object a contrasting color so that it will stand out.

For best results, photographs for halftones should be printed on glossy paper. They should have slightly more contrast than a regular print, because light tones become a shade darker and dark tones become slightly lighter in halftone reproductions. A sharper halftone is also obtained if the photograph is larger than the finished product.

Line drawings are also useful. Small sketches in the margins or with the headings give an interesting touch to the pages, and line sketches often can be used to show things that would be difficult to illustrate with a photograph. Correctness of gaffs on lineman's climbers is a good example of this. Many a rigid rule can be put across with the aid of a humorous cartoon. However, the humor should tie in closely with the point being made; it should not be used for its own sake.

There are many ways of making a manual more attractive through the use of more than one color. Color is expensive, since each color involves a separate press impression and separate engravings. You should balance the advan-

37 FALLING ACCIDENTS EVERY HOUR*

WILL ONE OF YOUR MEN BE NEXT?

Every hour, falling accidents kill or disable 37 workmen!*

Are you sure your men are safe from unsafe footing?

You can give your workmen maximum protection against costly slipping and falling accidents with A. W. ALGRIP Abrasive Rolled Steel Floor Plate. ALGRIP is made by rolling tough abrasive grain as an integral part of the upper portion of steel floor plate. Wet or dry ALGRIP gives non-slip protection even on steep inclines. Wear only exposes new abrasive particles so maintenance is not required.

Engineers, architects, purchasing agents, and safety engineers are specifying A. W. ALGRIP for thousands of industrial and commercial applications. Follow their lead. Get more information now. Write for booklet **B-13.**

THERE'S NEVER A SLIP ON A.W. ALGRIP!

Magnification shows even distribution of abrasive grain in A.W. ALGRIP.

Even on steep inclines A.W. ALGRIP IS NON-SLIP!

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALAN WOOD STEEL COMPANY

CONSHOHOCKEN, PA.

125 Years of Iron and Steel Making Experience

Gentlemen:
Please send me your 8-page information-packed booklet B-13.

NAME _____ TITLE _____

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Other Products: PERMACLAD Stainless Clad Steel • A.W. SUPER-DIAMOND Floor Plate Plates • Sheets • Strip • Alloy and Special Grades

*17% of the 222 occupational injuries which occur every hour are due to falls. Source: National Safety Council's 1949 edition of Accident Facts.

PATCH A FOOT A MINUTE

Easy to Use

NON-SKID
QUICK-FLOOR

PLACE IT . . . USE IT Right away for . . .

PATCHING -- REPAIRING or COVERING

concrete—wood, metal or asphalt.

INSIDE OR OUTSIDE—NO MIXING, NO CUTTING—
NO DELAY FOR LIGHT or HEAVY DUTY!

Spreads thin at edges — TOUGH, will not break or crack — DURABLE —PERMANENT!

SAFE! NO SKIDDING or SLIPPING

Resurfaces worn, damaged or broken floors, aisles, platforms, ramps, stairways, driveways without delays or downtime.

SEND FOR NEW FOLDER
ASK ABOUT LOW COST PER SQUARE FOOT

RESURFACE WITH FLINTZ

1—Brush bone clean. Apply bonding agent. Flintz spreads like wet sand from drum or buckets.

2—Straight-edge Flintz thinly about ¼" thick evenly over area desired. Feather edge outer brim.

3—Start roller over newly laid Flintz a few times and let your trucks roll over it.

Also NON-SKID Wet or Dry.

READY MIXED FOR INSTANT USE

KEEP 'em rolling on LOW TRACTION FLINTZ—the thin section surfacer that provides long lasting smooth floors. NO BREAKING OF THIN EDGES! Hand operated or Gas propelled trucks continue to roll—after pulling has stopped. NO DELAYS.

LOW COST RESURFACER!

Like moist sand—FLINTZ spreads thinner, goes farther and costs less per square foot. Provides years of hard usage and Low Traction service.

ALL DURA TRED PRODUCTS ARE GUARANTEED

Write for complete information.

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Manufacturers since 1938
361 N. Central Park Blvd., Chicago 24, Ill.

tages against the cost carefully.

Distribution

If you want to make sure the manual will not be read depend entirely upon the manual to sell itself to supervisors and employees. Plan the initial distribution as carefully as you would an important sales campaign. The degree of success or failure of the project depends upon how the manual is accepted by the employees and how it is used.

Initial Distribution

It is advisable to distribute manuals to the supervisory force before they are given to the employees.

A good method is to mail them with a letter from the president. For a manual produced for a specific operation, the vice-president responsible for the operation should issue the letter. The letter should stress the importance of safety, tell what is expected of the supervisor, and announce a date for a supervisors' meeting on the manual. The date should be far enough in advance to allow the supervisor to go over the contents and digest them. At the meeting, questions should be answered and the supervisor should be briefed on how to make effective use of the manual.

Only after the supervisors understand the manual and how it is to be used should it be distributed to employees. The distribution should be made at safety meetings, and the sections that will affect those present should be discussed. Some companies schedule a series of meetings to go over the contents with the men.

Many companies include a form in the manual on which the employee signs for the manual and indicates that he has received it, has absorbed the contents, and understands that violation of any of the rules will be cause for dismissal. In theory, this is a fine procedure. Practically, it doesn't mean too much.

An index is the best method of locating material in the manual. It should be carefully prepared. Tables of contents show the major divisions. Some companies use a

tab system for locating the divisions and put a table of contents at the beginning of each major division.

Illustrations break up the textbook appearance of a manual and make it more attractive. Photographs are popular because they lend a touch of realism. Show human interest in photographs where possible, and have them illustrate the point. Line drawings and sketches can be used effectively. They often can be used to illustrate things that would be difficult with photographs.

Before distributing manuals to employees, they should be given to the supervisors and reviewed with them. The practice of having employees sign a statement holding them responsible for the contents of the book often allows the supervisor to pass the buck on his safety responsibilities and may create resentment among employees.

Revisions should be discussed with employees. A control of supply and distribution will see that all necessary employees receive the manual initially and that revisions or additions are properly distributed. It also facilitates revision and reprinting and assures an adequate stock.

First of all, it creates resentment among the men for being held responsible for everything in the book. Next it allows the supervisor to pass the buck on his safety responsibilities. Finally, it is an implied threat that is difficult to enforce. It is much better to have the supervisor keep a record of the employees to whom he has given manuals, or to have them merely sign a list or receipt indicating that they have received a copy.

Revisions

From time to time revisions are necessary. They should be discussed with the employees when issued. At this time the old information can be picked up or changes supervised. If a loose-leaf type of manual is used, changes are relatively easy to make. In this kind of manual, it is desirable to have the date of issue printed at the bottom of each page. Then it is easy to see wheth-

Invisible . . . deadly . . . all-pervading — the fumes of a poisonous gas crept relentlessly down the valley.

Already a wide area of forest stood stark and devastated. Beyond lay a town and the homes of people. Would they be caught next in the choking, acrid gas?

The source of trouble was a large paper plant. Because of a temporary shortage of certain raw materials, manufacturing operations had had to be changed, resulting in the escape of a poisonous gas in high concentration.

Calling on wide experience gained in solving industrial problems for hundreds of Ætna policyholders, the Ætna safety engineer quickly improvised a sheet metal apparatus. It worked perfectly. The plant's management and the whole community breathed a sigh of relief. And, as a profitable by-product, the deadly gas was converted to a usable bleach.

The skill and ingenuity of Ætna's safety engineers are yours to command when Ætna Loss Prevention Service stands guard over your plant. Why not ask your local Ætna representative for further information on this valuable Service?

ÆTNA CASUALTY AND SURETY COMPANY

The Ætna Life Affiliated Companies write practically every form of insurance and bonding protection

LIFE AND CASUALTY
Ætna Life Insurance Company
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FIRE AND MARINE
Automobile Insurance Company
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Hartford 15 Connecticut

SIGHT SAVER CLEANING STATIONS

PROMOTE SAFETY

INCREASE PRODUCTIVITY

IMPROVE MORALE

Dirty eyeglasses, like dim lights and dull tools, are dangerous and inefficient. Make clean glasses a habit in your plant and office by making it easy for your people to keep their glasses clean. Install Sight Saver Cleaning Stations. It will pay you to supply Sight Savers, the Dow Corning Silicone treated tissues with a world-wide reputation for being the best and the easiest way to clean, polish and protect eyeglasses and safety goggles. Let Sight Savers wipe away the best excuse men give for failing to wear safety glasses. Implement your eye safety program with Sight Saver Cleaning Stations.

NO MUSS . . . NO FUSS . . . NO FLUID Attractive all-metal SIGHT SAVER cleaning stations are easy to install . . . easy to service. Fool-proof, permanently lubricated mechanism dispenses one 3 by 7 inch tissue at a time; each tissue scientifically treated with SILICONES made by Dow Corning, the world's first and largest producer of silicone products and silicone treated tissues.

Available from the leading Safety Supply houses in all principal cities.

No. 60 *Black Dispenser* . . $2.50
No. 61 *White Dispenser* . . $2.50
No. 65 *Refill Packet containing 800 sheets* . . $1.45

FIRST IN SILICONES
DOW CORNING CORPORATION
MIDLAND, MICHIGAN

er or not revisions have been inserted.

Bound manuals present a more complex problem. Inserts, paste-in sheets, and paste-over sections are the usual methods of revision. When changes become too extensive, the entire manual should be reprinted.

Control

A control of supply and distribution is necessary to see that all employees entitled to manuals receive them and that revisions or additions are properly distributed. Usually this control is a function of the safety department or of the office of the operating head. Such control prevents the stock of manuals from becoming depleted when they may be badly needed. If the supply is running low, changes and revisions can be planned before the manual has to be reprinted.

SUMMARY

Safety manuals require much careful planning and preparation before they are issued. The first step in planning a manual is to (1) determine the objectives (2) decide whether one general or several specific manuals should be prepared and (3) decide how the manual will be used. Consider the manual as a supervisory tool.

Information for the manual should be gathered from as many sources as possible. Do not depend on any one person's experience. The contents should furnish the information needed by employees to do their job safely.

Use a positive constructive approach in writing copy for the manual and avoid the "regimentation" style of *do, do not, must* and *must not.* Remember you are writing for someone else to understand and the success of the venture will depend on how well you tell the safety story. The readability of the manual can be gauged by using Dr. Flesch's formula but should also be tested by reading by people of the type to whom it is addressed.

Avoid long sentences and complicated words. Use personal references as much as practical. Study your employees and write your copy so they will understand it.

Copy should be reviewed by both management and bargaining unit representatives. A joint committee accomplishes this very well. Letting the foremen and employees participate in preparing the manual is merely common sense.

Seek the advice of the advertising department or other experts in the publishing field for the technical details of printing. Offset and regular printing are the most popular methods of printing manuals. Readability should be the main consideration in the layout and typography.

The size of the manual should be determined by the intended use. Binders vary greatly, with a loose leaf binder made of heavy weight artificial leather being the preferred type. The loose leaf style permits ease of revision and addition.

An uncoated paper without glare is best for the body of the manual. Photographs, however, reproduce best on a coated paper. Some companies use a combination of both.

Safety's HONOR ROLL

Current records of operation exceeding 500,000 man-hours without a disabling (lost-time) injury are invited for this department. For records of one year or more a minimum exposure of 300,000 man-hours is acceptable. Records should be continuing or terminated within one year of date of reporting.

Heintz Manufacturing Co.

Philadelphia—June 18 to August 26, 1951; 832,380 man-hours.

Monsanto Chemical Co.

J. F. Queeny Plant, St. Louis, Mo.—363 days; 4,393,039 man-hours to June 8, 1951.

Merrimac Div., Everett, Mass.—312 days; 2,438,243 man-hours to May 28, 1951.

Plastics Div., Springfield, Mass.—125 days; 1,505,983 man-hours to May 17, 1951.

Phosphate Div., Monsanto, Tenn.—355 days; 1,077,380 man-hours to April 1, 1951.

Merrimac Div., Camden, N. J.—6 years, 236 days; 717,896 man-hours as of August 1, 1951; continuing.

Phosphate Div., Anniston, Ala.—2 years, 183 days; 2,011,029 man-hours as of August 1, 1951; continuing.

Organic Div., Nitro, W. Va.—1 year, 217 days; 2,525,839 man-hours as of August 1, 1951; continuing.

Mound Laboratory, Miamisburg, Ohio—283 days; 1,172,544 man-hours as of August 1, 1951; continuing.

Phosphate Div., Trenton, Mich.—1 year, 177 days; 1,130,775 man-hours as of August 1, 1951; continuing.

Vancouver, B. C., Plant—2 years, 175 days; 331,314 man-hours as of August 1, 1951; continuing.

Phosphate Div., Carondelet, Mo.—1 year, 337 days; 550,952 man-hours as of August 1, 1951; continuing.

Central Research, Dayton, Ohio

This wrench protects your plant!

BERYLCO SAFETY TOOLS resist sparking... are noncorrosive and nonmagnetic

Berylco Safety Tools, made of high-performance beryllium copper, have hundreds of applications in...

Petroleum Industry—pipe lines, pumping stations, tankers, refineries, distributing centers.

Chemical Plants—process equipment, storage tanks, tank cars, or wherever corrosive agents affect steel tools.

Maritime Service—fuel lines, or wherever resistance to excessive salt-water corrosion is needed.

Explosives Plants—pipelines or places where explosives are handled or stored.

Gas Industry—gas wells, pipe lines, gas-manufacturing plants.

Municipal Maintenance—underground gas and sewer lines.

General Industry—fuel lines or pipe lines and tanks containing solvents, and wherever inflammable liquids, gases and dusts are stored or handled.

SEE YOUR LOCAL JOBBER TODAY!

BERYLCO THE **BERYLLIUM** CORPORATION

DEPT. 1K, READING 14, PENNSYLVANIA

What price accidents?

In your business, "hidden costs" of an accident can be four times the amounts paid for workmen's compensation plus medical care! An Employers Mutual Insurance Team can help you reduce accidents and their staggering costs. This teamwork also gives you the finest insurance service at rock-bottom cost.

Better investigate!

EMPLOYERS MUTUALS of WAUSAU

Home Office: Wausau, Wisconsin

Offices in principal cities . . . Consult your telephone directory

Employers Mutuals write: Workmen's Compensation-Public Liability-Automobile-Group Health and Accident-Burglary-Plate Glass-Fidelity Bonds-and other casualty insurance. Fire-Extended Coverage-Inland Marine-and allied lines. All policies are nonassessable.

EMPLOYERS MUTUAL LIABILITY INSURANCE COMPANY OF WISCONSIN

EMPLOYERS MUTUAL FIRE INSURANCE COMPANY

—1 year, 34 days; 473,397 man-hours as of August 1, 1951; continuing.

Mead Corp.

Brunswick Pulp & Paper Co., Brunswick, Ga.—378 days; 965,000 man-hours as of August 12, 1951; continuing.

Nashville Div.—731 days; 460,000 man-hours as of August 16, 1951; continuing.

National Distillers Products Corp.

Cincinnati Div., Carthage Distillery—November 7, 1950, through August 31, 1951; 550,520 man-hours; continuing.

Frankfort Div., Old Crow Plant—August 12, 1950, through August 31, 1951; 524,607 man-hours; continuing.

Republic Steel Corp.

Youngstown District, Open Hearth, Blooming and Billet Mills—1 year; 531,732 man-hours as of September 10, 1951; continuing.

Wood-Mosaic Co.

Louisville, Ky.—October 25, 1950, through September 1, 1951; 788,626 man-hours; continuing.

Industrial Health

—From page 83

more and better equipped hospitals and more and better equipped physicians. This is going to mean a need for more teaching facilities and also for expanded public health programs in the next few years.

Absentee Studies

Putting Absence Record to Use, by W. G. Hazard. The American Journal of Public Health, 41:1087-1095 (September, 1951).

Absence record in most companies was started mainly as a result of the personnel shortages of the most recent war when it became of great importance to every plant to keep the maximum possible number of people at work. Since the end of the war a considerable number of people have found that the information which they provide is sufficiently interesting that they have maintained the

practice although the keeping of daily absence record on a multi-plant operation is a staggering job.

The job of keeping records is particularly trying when an effort is made to keep track of all disabling illness cases. Eighty-four per cent of the cases last one week or less and these week-or-less cases contribute only one-fourth of all the days lost due to illness. They probably cause a disproportionately high percentage of the disruption to production, however.

Absence record in the group can be used as a tool to spot undesirable working conditions, such as the effects of excessive heat or inadequate ventilation or even the difference between good and poor supervision. In one group of 15 plants of one company, for instance, there is shown a ten to one ratio in the absences between the plant with the best and the one with the worst record. Since 11 of the plants make identical products under essentially identical conditions of physical layout and wage rates it is pertinent to inquire what makes the difference.

When the cases are considered as individuals they have other types of significance. They will isolate the one-fourth of the employees who have one-half of all the absences and permit the medical group to concentrate their efforts where they will do the most good. It is when considered as cases of absence involving individuals that the absence records are also likely to pose the largest number of unanswered questions.

Hygiene Foundation Meeting

The 16th Annual Meeting and Conferences of the Industrial Hygiene Foundation will be held on November 14 and 15 at Mellon Institute, Pittsburgh, Pa. Four professional conferences—Medical, Chemical, Engineering and Legal —will be held on November 14. The general meeting, which emphasizes management aspects, will be held on November 15.

Keynote Speaker for the general meeting will be Don G. Mitchell, president of Sylvania Electric Products, Inc.

NEW APPROVED PUMP makes liquid handling SAFER

These new Tokheim Hand Pumps are a great boon to industrial safety. They stop wasteful dripping and slippery floors, reduce fire hazard, save on drum storage space, and eliminate accidents common to other methods of liquid transfer. Their fast, easy double-action speeds production, reduces costs. Ideal for handling many liquids. Available in hose and spout models for use with drums or underground tanks.

Approved for use with petroleum liquids — ideal for many others.

FOR USE IN SCORES OF INDUSTRIAL OPERATIONS

For filling oil coolant reservoirs directly from drum.

For refueling lift trucks and other industrial equipment.

For transferring liquids to smaller containers.

QUALITY TOKHEIM DOUBLE-ACTION HAND PUMPS

WRITE FOR LITERATURE

General Products Division
TOKHEIM OIL TANK AND PUMP COMPANY
1670 Wabash Avenue, Fort Wayne 1, Indiana
Factory Branch: 1309 Howard Street, San Francisco 3, California

39th Safety Congress

—*From page 27*

work programs and ten local television programs carried Congress appeals during the week.

Many of the sponsors of the network programs cooperating this year were members of the National Safety Council who had representatives at the Congress.

Subject Sessions

Of outstanding importance in the program of each National Safety Congress are the subject sessions arranged by the ASSE. "Civil Defense and the Safety Engineer," was the topic of a special session as well as discussion of its problems at the Annual Meeting and at various sectional meetings throughout the week.

"Coordinating Safety with Plant Engineering" in achieving "built-in" safety presented the subject from three angles—plant design, plant layout and plant operation.

Growing appreciation of the value of effective programs against on-the-job and off-the-job accidents in promoting good public relations for industry was the subject of a special session.

"Getting Audiences to Think" was the theme behind a session on "Conference Techniques," with a demonstration and explanation of several methods of group communication.

The recently inaugurated Small Business and Associations program of the National Safety Council received additional promotion at a session well attended by association executives and sectional officers. The experiences of the Folding Paper Box Association and the Portland Cement Association were described with examples of actual savings by companies with effective accident prevention programs.

Supplementing the session on "Associations and Their Safety Programs" was the ASSE-sponsored subject session on Safety in Small Businesses.

Industrial Hygiene, Maintaining Interest in Accident Prevention, and Static Electricity were subjects discussed at other sessions.

The Banquet

As usual, the Congress Banquet was a sell-out. The speaker was Robert Young, radio and motion picture star, who spoke from a keen personal interest in safety, particularly as it involved young people.

"Our best weapon against teenage tragedy is the pride and enthusiasm of the kids themselves," he said.

To thousands of American families, Robert Young is best known as the very human and fallible father in the radio network show, "Father Knows Best," which received the National Safety Council's Public Interest Award for Exceptional Service to Safety and the Alfred P. Sloan Foundation Award for 1950.

Transit Industry Wins Centennial Honors

For 100 YEARS OF SERVICE to safety, the transit industry, comprising bus, streetcar, trolley coach and rapid transit companies, has received a special award of honor from the National Safety Council.

The award was presented to H. L. Bollum, president of the American Transit Association, by Ned H. Dearborn, president of the National Safety Council, at a luncheon of transit executives and government officials in the Waldorf-Astoria Hotel, New York, on August 30.

Visitors from Overseas

Delegates and speakers from other countries have taken part in many previous Congresses but this year's meetings had even more of an international flavor than usual. Prominent in the meetings of the Coal Mining and Mining Sections was A. E. Crook, principal inspector of mechanical engineering in the Safety and Health Division of the British Ministry of Fuel and Power, London. Gunnar Hultman, managing director of the Swedish Pulp Employers Association, Stockholm, was speaker at a luncheon meeting of the Pulp and Paper Section.

Also attending the Congress were representatives of Germany, Austria, Ireland and Holland, who are studying industrial methods in this country under sponsorship of the Economic Cooperation Administration.

The Exposition

Every available foot of exhibit space in the Casino Room of the Congress Hotel and the Exhibit Hall of The Stevens was taken by attractive displays of equipment, products and services for the promotion of accident prevention, fire protection, occupational hygiene, and first aid treatment of injuries. In addition to the commercial exhibits were displays by government agencies and those of National Safety Council services. A more detailed description of the Exposition will appear in the December issue.

The Industrial Conference

Climaxing a busy year of programs in many fields of safety, the Industrial Conference met in an all-day session on the Sunday preceding the official opening of the Congress. Reports of the NSC Sections and the committees engaged in various projects were available in mimeographed folders and these were supplemented by informal discussion and supplementary reports.

The National Safety Council is now sponsoring 20 ASA Codes and has representation on 39 other code committees.

Planning the Work

—From page 21

tion procedure, and so on. In his decisions, the basic importance of safety in the over-all picture is always a key consideration before him.

In this instance, however, due to the scope of the project, number of buildings involved, site size and other factors, it was recognized that the duties of each area superintendent were already too great to superimpose also that of the safety program. To solve the problem, co-ordinators were given authority to enforce accident prevention measures in addition to their regular job assignments of field clerks, engineers, general foremen and assistant superintendents.

Meetings of the committee, and of the entire construction crew, played an essential role in focusing attention on safety. The top-level committee convened once a month to develop a positive program, implement it as the occasion demanded, and analyze various problems as they cropped up. Then, regularly scheduled meetings were held for workers in selected individual groups, with their foremen, area superintendents and supervisory project personnel.

Frank discussion and exchange of views over accident experience or working conditions held the front seat at these informal gatherings. Faults and mistakes were examined in detail, good words given for good performance records.

Other group meetings, regularly scheduled, featured interesting talks, some of them by speakers from the National Safety Council. At these sessions, new employees received special attention. Safety rules were explained right along with the duties of the job. Those new to construction work were oriented in the tricks of the trade —all of the things to watch for on a building project.

Effectively supplementing these meetings was the utilization of a number of "merchandising aids," all designed and calculated to hammer home the basic concept

PROTECTS HANDS
against oil, paint, grime

PREVENTS TIME LOSS

DU PONT PRO-TEK
—a hand cream that acts like an invisible work glove

YOUR WORKERS' HANDS can be easily protected against paint, grime, and insoluble cutting oils with Du Pont PRO-TEK. This hand protective cream acts like an invisible work glove. Just have your workers rub it on their hands and arms before starting work. It washes off easily when the job is done—and takes all the grime with it.

Ask your supplier for Du Pont PRO-TEK. Or write E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Del.

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING THROUGH CHEMISTRY

PRO-TEK
HAND PROTECTIVE CREAM

PROTECT YOURSELF

—by protecting those employees who are using dangerous, old fashioned hand, foot and bar methods of closing hopper bottom car doors with latch-type locks. Prevent ruptures, strained backs, smashed fingers and other serious injuries by providing Prescott Safety Tools. They make the job safe and easy and also save time. It's your responsibility. Write today for free folder.

The Trumbull Mfg. Co.
Warren, Ohio

Sure! Maintenance Men are HARD TO GET...

That's why I depend on HILLYARD MAINTAINEER SERVICE

Why "buck" the problem when you can relax with easy-going Hillyard *Floor Care.* Simplified Hillyard Care substitutes "know-how" for brawn . . . easier methods save man hours of work . . . specialized *chemical* products perform with "behind-the-ears" thoroughness . . . when I need help—Hillyard sends along a trained floor expert to lend a hand on the job . . . his straight-from-the-shoulder advice doesn't cost me a cent.

YOU CAN'T BEAT SERVICE LIKE THAT

any day in the week—particularly NOW when *good* maintenance men are so hard to find.

★ Talk over your maintenance program with a Hillyard Maintaineer today. Get the benefit of his years of specialized experience. Learn the Hillyard way to maximum maintenance with a minimum crew . . . and *reduce those costs as much* as 50%. Write for Free Hillyard Help.

"on your staff not your payroll"

HANDLE WITH HILLYARD CARE!

HILLYARD CHEMICAL CO.
ST. JOSEPH, MISSOURI
Dept. U-11
Branches in Principal Cities

DAV-SON BULLETIN BOARDS

Use DAV-SON Cork Back Bulletin Boards for pinning up notices, letters, photos, etc. Many sizes and styles available for your particular requirements.

Write for Special Circular

We manufacture the famous DAV-SON Changeable Letter Bulletin Boards, Safety Displays, Lobby Directories and Name Plates for every purpose.

DAV-SON

A.C. DAVENPORT & SON, INC.
ESTABLISHED 1932
311 N. DESPLAINES ST., CHICAGO 6, ILL.

of accident prevention along the line—to sell safety directly to each man on his individual job.

One of the initial steps taken in this direction, for example, was the erection of two billboard-type display boards, each 10-feet high and 12-feet wide, in locations where workers would be sure to see them in coming to and going from the job. Mounted on these boards were multi-colored jumbo posters secured from the National Safety Council. These were changed at least once a month.

Instant impact also was secured by means of another display board, eight-feet high and ten-feet wide, which was divided in two parts. The upper half featured a safety slogan, which was changed periodically.

The bottom half of the board, functioning as a safety barometer, featured the wording: "this job has operated — days without a lost-time accident."

Adjacent to this sign was a flagpole from which the Green Cross of Safety Flag flew as long as no lost-time was encountered. When an accident occurred, the flag was taken down until the end of the current month, then raised again until another accident occurred.

Other posters and signs, smaller in size and supplied regularly by the home office in Cleveland, were liberally used. They were conspicuously spotted in all working areas where the majority of workmen would see them frequently. These reminders, developed by Austin, were printed in two colors on 8½ by 11 inch cardboard.

One particular series, which aroused considerable interest, featured a construction worker drawn in caricature style. He carried through on a number of signs covering different types of accidents or safety measures. The safety message, in each case, appeared as a quotation, "the boss sez" from the worker, himself. Here are a few examples:

Under the caption "Bend 'Em," one shows a worker hammering over some nails sticking through a plank, commenting that, "the Boss Sez: Bend all nails over or pull them out . . . keep yard clean and wear thick-soled shoes."

Headlined "Honk," another card shows a tractor operator looking backward, cautioning: "The Boss Sez: Give good warning, then proceed slowly and watch out for obstacles, when moving machines."

A third illustrates what the "well-dressed" construction worker wears—a hard hat, for protection against falling objects; goggles, to protect eyes against flying chips, fumes and arc flashes; clothes of proper type and fit, to prevent serious falls or catching in machinery; gloves, to safeguard against cuts, splinters and abrasions; and hard shoes, for protection against falling objects, nails and crushing.

Special safety letters from Austin's home office also contributed in spreading the gospel of safety. Copies of these were distributed to all supervisory personnel. Each letter—never longer than a page—was devoted to a specific subject, which was given a catchy treatment to arouse curiosity and tempt even a busy supervisor to "stop, look, and read."

As a sample — "Those Feet Again," with a few digs on keeping the men's feet off nails. "More Pow Wows," pointing up the importance of meetings chockfull of interesting safety material. "Those Hands of Yours," stressing hand care through careful, wise use. "Good Housekeeping," with some encouragement to a superintendent to do as well on the job as the little lady does at home.

No attempt was made to be technical or go into detail. The main purpose of each letter was simply to spark interest in one particular aspect of safety.

The positive rather than the negative approach was used in all of the signs and letters. Our experience indicates that you get a better response to "*Do* This" rather than "*Don't* Do This." Likewise, we stay away from gory illustrated signs, with blood dripping from a wound, or a man falling from a ladder.

The *Employee's Handbook of Safety Rules* was another effective safety tool used. A pocket-size, illustrated, 40-page manual, it was developed by the top-executive safety committee specifically for use at Argonne.

The manual is a comprehensive, yet concise compendium of safety suggestions covering 12 different trades. Altogether, it contains 305 items, segregated in sections for each trade. The booklet comprises

"Chest Protecting"

WELDING HELMET

Welders have the habit of working with an open shirt front. The Sellstrom No. 241 Welding Helmet is especially designed for these welders. It has a long, straight front to give full protection to the exposed neck and chest.

This helmet is of one-piece molded fibre construction. No rivets used. It has a formed top to protect the top of the head, has ample room inside, is perfectly balanced, weighs only 16 ounces and is extremely comfortable. Can be furnished with any of our three headgears and with either the standard or special lift front changing lens retainer.

This helmet, equipped with our Super Quality Sell XX Welding Plate, will be mailed you by prepaid parcel post for testing and actual use under your own working conditions for only $8.50. You can buy it for slightly less from your dealer.

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MANUFACTURING COMPANY
Sellstrom Safeguards Your Eyes and Face
622 N. Aberdeen St. Chicago 22, Ill.

APPROVED...
by customer
by workmen
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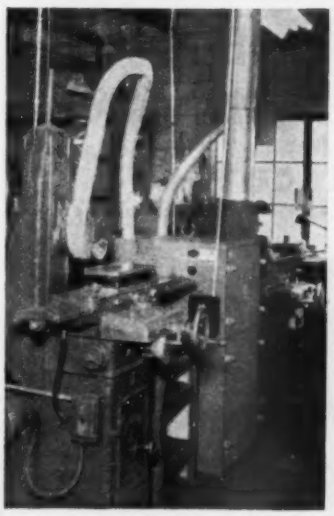
TORIT DUST COLLECTORS



Here a Torit No. 84 Dust Collector is meeting all the requirements of the customer, the workers, and a state commission, in trapping and cleaning dust laden air from two surface grinders. The only special adaptation necessary was to connect the exhaust vent to a pipe leading through the roof—a special condition in this state.

Compact and self-contained Torit Dust Collectors are exceptionally easy to fit into present and future production set ups. Installation and operating costs are low and efficiency is high. Today, well over 20,000 are in use throughout American industry.

If you have an industrial dust problem, write today for complete information and latest Torit catalog.

TORIT
Manufacturing Co.
291 Walnut Street • St. Paul 2, Minn.

are your glove costs too high?

YOUR COST DEPENDS ON THREE FACTORS

1. *Using the correct glove for the job.*
2. *Proper stock control. A clean pair for a dirty pair.*
3. *Salvaging by proper cleaning, repair.*

Wash-Rite specializes in "Rite-to-Wear" gloves for every job. Complete stocks. Immediate shipment. We have assisted many of the country's largest industries in setting up a money saving glove control system.

"Wash-Rite" is exclusively engaged in the correct and scientific cleaning, sterilizing, repairing, reshaping and processing of industrial work gloves, aprons and other protective clothing.

REDUCE YOUR COSTS WITH "WASH-RITE'S" PROVEN SERVICE. SEND US A FREE TRIAL ORDER TODAY!

Wash-Rite Company, Inc.

1412-26 CORNELL AVENUE · INDIANAPOLIS 2, INDIANA

"Fire-Chief" Finished

WELDING CURTAINS

to confine the welding operation to a given area

SALVAGE COVERS

Used to protect machinery, and other equipment from water, dust and snow.

FLAMEPROOF CANVAS

impregnated with Hooper's Fire Chief treatment under their patent which carries the Underwriters' Laboratory seal.

A. Smith & Son Inc.

Established Eighteen Hundred Sixty-Seven

MANUFACTURERS OF REEVES STRETCHER

Ridge Ave. at Green — Philadelphia 23

"If It's Made of Canvas, We Make It"

four main parts: general project safety rules; safety rules for individual trades, with rules conveniently grouped and enumerated for each trade; safety rules for office workers, and information for foremen.

Designed for and distributed to all project personnel, the manual presents, in easy-to-read form, a digest of regulations, together with special rules of safe construction practice, originating directly from Austin's past experience.

Another form of communication was the use of specially prepared, short and snappy typewritten "safetygrams," which were attached weekly to every worker's paycheck.

Records were kept as construction work progressed, providing a clear, up-to-the-minute picture of the project from the safety viewpoint. Individual accident reports were made out on every worker treated, no matter how minor the mishap. Individual cards, completely charting medical treatment of the workers affected, also were made. The safety engineer kept a large chart, classifying all injuries according to working areas, labor classification, and type of injury.

Such records proved valuable in spotlighting conditions which could have jeopardized safety.

Beyond these tested techniques and merchandising methods, special attention was paid to known inherent hazards in construction work. Among these, to name a few, were construction of a large boilerhouse, several miles of 15-foot to 25-foot trench excavations, many high scaffolding jobs, and construction of a high-power electrical supply line throughout the project.

By rigidly following regulations and standard working conditions established by AEC and Austin for such hazardous types of work, a large percentage of serious accidents can be and were eliminated. On the Argonne project, in the cases cited and others, special safety co-ordinators were constantly on the watch for any violation of regulations.

Through cooperation of the guard force, weekly reports were made to the safety department,

listing all safety violations and dangerous areas noticed by the guards.

Efficient planning and organization were vital in getting the program started off on the right foot. Another factor was AEC's extreme safety consciousness which, matched by that of the University of Chicago and Austin executives, insured sustained interest and direction from top-level management.

Still another basic force which aided immeasurably was the splendid work of the safety coordinators in handling the myriad of details on the construction scene. They were constantly on the lookout for the least deviation from safe construction practice.

But perhaps the biggest single element in the program was the wholehearted cooperation and interest of the workers who seemed to appreciate the well known fact that "a careful workman is the best safety device."

Two-Way Radio to Protect G-E Plant

A TWO-WAY RADIO SYSTEM to be used exclusively for plant production will be installed at the Schenectady Works of the General Electric Company.

The network will include 35 base stations at guard positions throughout the 600-acre Schenectady Works and 30 mobile stations installed in plant police cars, fire trucks and ambulances. The radio equipment is being supplied by the G-E Electronics Division at Electronics Park, Syracuse, N. Y.

The construction permit recently granted by the Federal Communications Commission is believed to be the first in the country for this particular purpose.

During World War II Schenectady Works had been protected by a similiar radio system which had been issued to Schenectady County but upon cessation of hostilities the company turned the radio system over to the county where it is now used for police and fire protection activities.

Safety and Service Emblems

Fewer accidents mean more manpower. Safety Emblems for various lengths of "no lost time" service instill the competitive spirit necessary for employee cooperation.

Service Award Emblems for 1, 3, 5, 10, 25 and 50 years of continued employment increase loyalty and reduce labor turn-over.

Easily seen and readily recognized emblems such as those illustrated above are paying big dividends in many large plants. Also Identification Badges, Plaques, Athletic Medals, Trophies, etc.

Write for new catalog!

METAL ARTS CO., Inc.
Dept. 10, Rochester 21, N. Y.

NEW Mild Fungicide **TOUGHENS** THE SKIN

STOPS ATHLETE'S FOOT *in 2 weeks!*

Cuts Operating Costs ⅓

Believe it or not . . .

DEATH VALLEY'S ALKALI FLATS

Reveal the secret of Nature's own Method

THE ALKALI FLATS destroy plant life by Salt Action . . . and the Athlete's Foot fungus is plant life.

Everybody would enjoy foot health if we all went barefooted each day on a Salt Flat.

IN THE SAME WAY the mineral salts in non-toxic Foam-X soon restore shoe-softened skin to its original toughness and **STOP ATHLETE'S FOOT!**

Bring the Akali Flats to your shower rooms . .

"A GODSEND FOR SORE BLISTERED FEET" says a Dallas, Texas user.

TRY IT AND SEE FOR YOURSELF. **Pay nothing unless 100% satisfied!**

FOAM-X RELIEVES FOOT FATIGUE

Stops Costly Layoffs --- Steps Up Efficiency

Pays For Itself Many Times Over!

IN CANADA WRITE: SAFETY SUPPLY CO., TORONTO

Send full details on 30 day "Proof or No Pay Test."

Name.....

Address.....

City.....Zone.....State.....

How many use showers.....

SHIPPING DEPOT: HUNTINGTON, INDIANA

FOAM-X COMPANY · 334-B WEST ALAMAR · SANTA BARBARA, CALIFORNIA

Learn about Frost's SURE-FOOT Non-Slip Abrasive Paint—the paint with the positive traction that remains non-slip wet or dry.

SURE-FOOT
NON-SLIP ABRASIVE PAINT

will eliminate these potentially dangerous areas—whether surfaced with steel, aluminum, wood or concrete:

- Stairways
- Inclines
- Aisles
- Landings
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- Sidewalks
- Platforms
- Cat Walks
- Observation Platforms
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EASY TO APPLY—SURE-FOOT spreads like ordinary paint on any clean, dry surface. No formulas to mix and no special tools or skilled workmen required in its easy application.

ECONOMICAL—Low in initial cost, SURE-FOOT offers low cost coverage . . . costs less than 10¢ per square foot installed.

EASY TO RE-PAINT—Carbide crystals provide the non-slip element in Frost's SURE-FOOT Paint. Easily renewed where heavy traffic eventually wears through. Just re-paint—no stripping or removing of old paint.

Write Today . . . to Dept. B. for the SURE-FOOT Bulletin. Discover for yourself how *inexpensively* you can eliminate slippery conditions in your plant.

Frost PAINT AND OIL CORPORATION
MINNEAPOLIS 13, MINNESOTA

Tests for Safety Clothing

—From page 25

or 60 feet on the head of a man working below. Another problem is that of a small, heavy tool falling a considerable distance. When the Naval Hospital at Bethesda was under construction, a cold chisel dropped from the 23rd floor, went completely through the brim of a "hard boiled" hat on a man working in the pit, fortunately without striking the wearer. Hazards of this kind cannot be ignored when writing safety standards or preparing test requirements.

There is, of course, a practical limit to the strength of such hats because of the great weight that would be involved. Even if alloy steel helmets were worn, impacts beyond a certain value might kill the wearer even though the missile did not penetrate the helmet. The impact of the bullet from a Colt automatic on a steel helmet can break a man's neck even though the bullet makes a comparatively small dent in the steel.

There is obviously a field for study in the impact of small relatively high velocity tools on protective head gear.

While goggles are scarcely in the classification of protective clothing, I would like to review briefly the story of test procedure for such equipment. The early edition of that code specified a drop test made with a half inch steel ball falling one meter (39.37 inches). Today most lenses will stand a 7/8 inch ball falling 50 inches. Again we have the problem of the small high speed projectile hitting such a lens. The Sectional Committee now revising this code will probably consider this problem, since industry reports many such cases. Thin splinters from a hardened steel die striking a lens with high velocity is an example.

On the other hand, standards for transmission of harmful radiation (ultra violet and infra red) remain unchanged (except for "rounding off" values in the second or third decimal place), since they were first worked out by Dr. W. W. Coblentz at the National Bureau of Standards during World War I. This, incidentally, was the first test of safety equipment to be worked out on a sound technical and reproducible basis.

Much remains to be done. There is available much well designed and constructed protective clothing, but means for evaluating it is not always available. In some cases clothing satisfactory for one purpose may be unsatisfactory in another occupation.

In developing performance and test requirements the following items should be kept in mind.

1. Maximum protection should be provided within the limits of "wearability" (and this includes the satisfactory performance of the assigned job) and cost.

2. The device or article should be designed to give maximum protection within the above limits for an entire industry or user group, or it should be available in different forms or grades that will give maximum protection to the group intended to use that particular type or style of clothing.

3. Tests should simulate factory or field conditions as closely as possible.

4. Users reactions should be checked and where serious objections or obvious weakness develop, the basic specifications and test procedure should be modified to secure a product that will prove satisfactory in actual use.

Safety Engineers May Win Air Force Commissions

Safety engineers in civil life may now enter the Air Force as a reserve officer, from second lieutenant to major, depending on age.

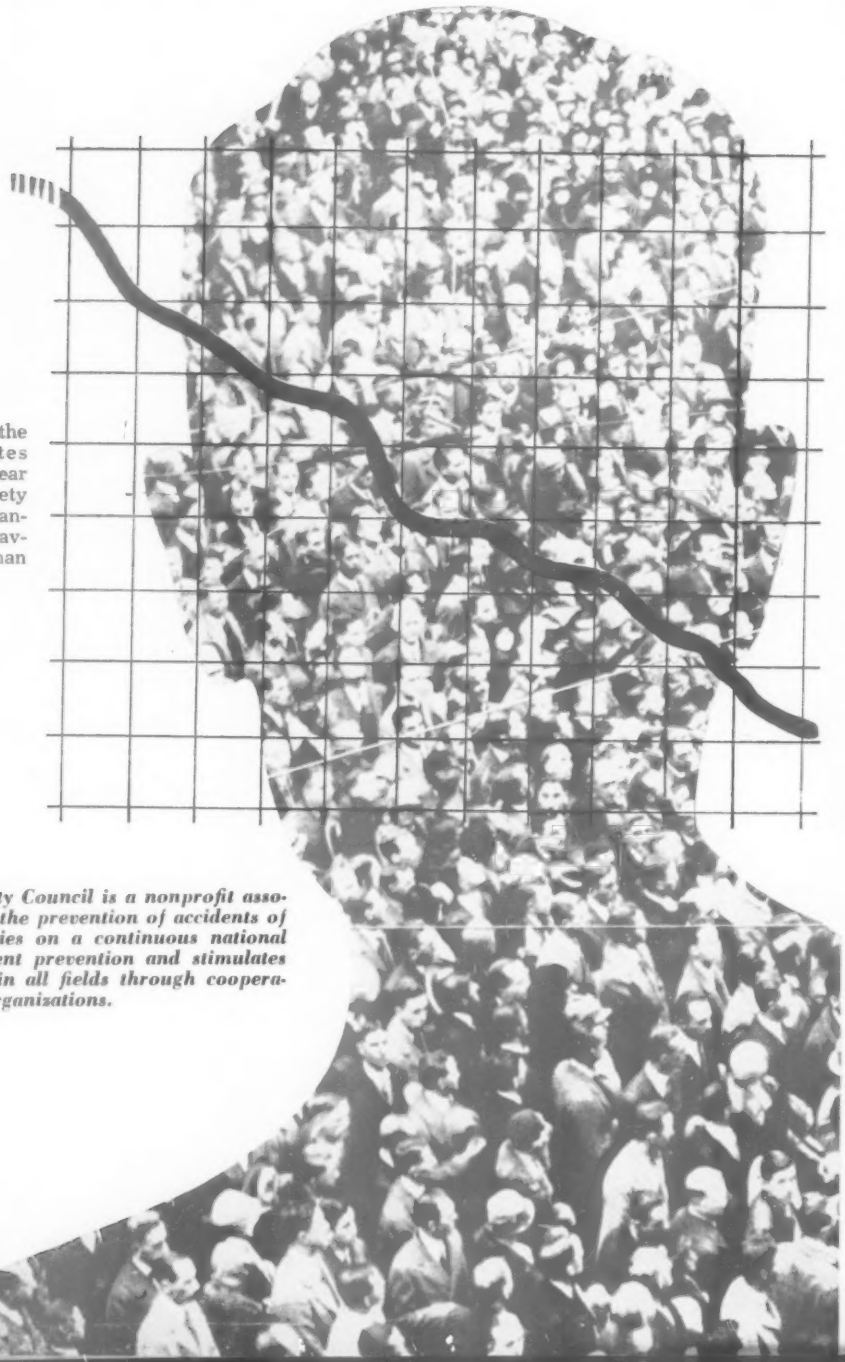
"Men who want to be commissioned in the Air Force as Safety Officer must have a B.S. degree in safety engineering or a closely related field," Lt. Col. Charles D. Morat, Jr., director of personnel procurement, explained. "Further, they must have experience in inspection of facilities for hazards; in accident analysis, investigation and prevention; they must know how to conduct educational programs and meetings for instructing personnel; and they must be familiar with industrial processes, production methods and management policies."

Applications or requests for further information should be addressed to Department of Military Personnel Procurement, First Air Force, Mitchel Air Force Base, N. Y.

the fight for life

GREEN CROSS FOR SAFETY

470,000 lives have been saved



Reductions in the annual death rates since 1913—the year the national safety movement was organized—represent a saving of 470,000 human lives.

The National Safety Council is a nonprofit association devoted to the prevention of accidents of all kinds. It carries on a continuous national program of accident prevention and stimulates interest in safety in all fields through cooperation with other organizations.

We are gaining ground!

Organized safety is at last beginning to roll.

It is finally getting top level volunteer leadership on the scale it needs and deserves.

It is beginning to enjoy the benefits of real cooperation by scores of big organizations which more and more are working as a safety team. But more cooperation is needed—and needed now!

It is finally getting the kind of active leadership and support it has to have from public officials—not from just a few, but from more and more.

The fact that safety "never had it so good" is evident from this annual report of the National Safety Council.

But there is nothing to shout about as long as accidents are the leading cause of lost working years of life, the second cause of lost years of life and the fourth cause of all deaths. Or as long as they take 90,000 lives a year—the equivalent of more than 1,500,000 years of useful, productive working life.

Such wanton waste of human life and resources is a national disgrace. In the midst of a total national defense effort, it is intolerable and inexcusable.

The fight against accidents literally is a fight for life. It is a fight that must be waged relentlessly until it is carried into every city, hamlet and crossroad of America.

Then, and only then, will the fight for life be fought the way it should be fought.

Ned H. Dearborn

President

Industrial safety

the problem:

The annual toll of occupational accidents
(excluding agriculture)

11,200 DEATHS

1,600,000 INJURIES

236,500,000 MAN-DAYS OF PRODUCTION LOST

$2,150,000,000 ECONOMIC LOSS

the program:

The direct responsibility for eliminating or correcting accident-producing factors rests on industrial management. However, the prevention program also requires the cooperation and participation of all concerned — employees and their labor organizations, trade and professional associations, insurance interests, government agencies, training institutions, and such specialized safety agencies as the National Safety Council itself. The Industrial Department's contributions include:

- *Collection and dissemination of information on accident causes and hazards, and the best techniques for eliminating or controlling them.*
- *Study and discovery of solutions for the specialized problems of various industries.*
- *Producing the training aids needed.*
- *Encouraging the widest use of tested techniques.*

Industrial accidents, like others, result from:

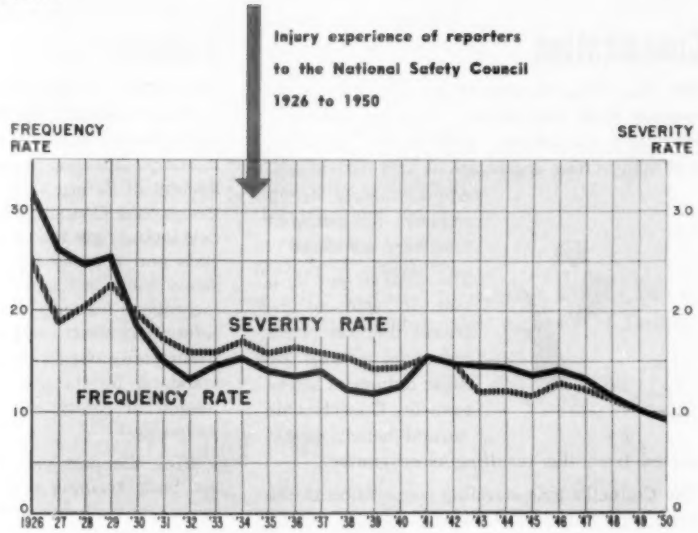
engineering factors

- hazardous arrangement of work
- absence of, or inadequate guards
- inadequate maintenance of facilities
- lack of personal protective equipment

and personal factors

- insufficient interest
- chance-taking and other unsafe attitudes
- lack of knowledge or skill
- defective physical condition

the progress:


Injury experience of reporters
to the National Safety Council
1926 to 1950
FREQUENCY RATE
SEVERITY RATE
30
20
10
0
SEVERITY RATE
FREQUENCY RATE
1926 '27 '28 '29 '30 '31 '32 '33 '34 '35 '36 '37 '38 '39 '40 '41 '42 '43 '44 '45 '46 '47 '48 '49 '50

The all-industry frequency and severity rates for National Safety Council reporting members in 1950 again reached new lows—both rates being 8 per cent lower than in 1949. Preliminary Bureau of Labor Statistics reports for *all* industry, however, are not encouraging.

A recent study revealed that the accident rates of nonmember industrial plants average 70 per cent higher than the rates of Council members.

Technical Services

reorganization

The Industrial Department of the Council has been strengthened and reorganized during 1951. Technical men were added to the staff, there was increased field activity, and the editorial staff was expanded. These changes have stepped up the degree of specialization and have improved planning and scheduling. The result will be more and better administrative and technical bulletins, more and better employee training aids, and improved consultation service. Sectional activities will be fostered by increased staff assistance.

new publications

1951 was marked by publication of the Second Edition of the ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS. This 812-page reference work starts the second phase of a 10-year program to simplify and expand the technical publications. Other publications completed in the past year include: 3 Safe Practices Pamphlets; 11 Data Sheets; 15 Safety Reprints; 4 Engineering Studies; 20 Detail Sheets; and a safety manual for tanneries, underwritten by the Tanners Council of America.

Industrial Safety Technical Services (continued)

Consultation

The consulting service of the Council's engineering staff was widely used by industry, insurance companies, government agencies, and many other organizations and individuals. Approximately 4,000 requests for information were answered.

The Council put on a man in 1951 to increase the use of its industrial service by State industrial safety agencies. Considerable mutual benefit is expected from the resulting close contact.

The Council's long-standing cooperation in the American Standards Association program to develop recommended standards of industrial safe practice has continued. In the last twelve months, work on four codes was completed; work on four others is in process.

The officers, members, and staff have contributed major services to the important work of the committees of the President's Conference on Industrial Safety.

Sectional Activity

The former Public Employee Committee was given sectional status in October, 1950. Since that date it has been consolidating memberships and developing a national organization with 14 regional groups and 10 technical committees.

Other Sections have continued to grow and to develop the specialized information needed in their industries.

The number of specialized meetings scheduled for the 1951 National Safety Congress will reach an all-time high.

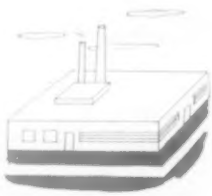
Training

The vitality of the safety movement depends in large measure on the competence of the men who are actually doing the safety job in industry. In cooperation with the American Society of Safety Engineers, the Council is developing new materials and courses for safety men, is fostering college training of safety specialists, and promoting higher standards for the profession of safety engineering.

During the past year the Council conducted six basic training courses and one advanced course at its headquarters.

Small Business Program

Industrial safety has to date made its progress principally in larger organizations. Yet small businesses employ about half of all American workers and suffer more than two-thirds of all occupational injuries! The impact of the tremendous costs of accidents in small businesses adversely affects the whole nation's economy.



The President's Conference on Industrial Safety, in recognition of these facts, devoted major attention to ways and means of reaching the managements of small business and the techniques to be recommended to them.

The Council has published a booklet, SAFETY PAYS THE SMALLER BUSINESS, used by insurance companies, community safety organizations, trade associations and others to interest small businesses in accident prevention. A grant was received from the National Association of Mutual Casualty Companies to establish and staff the Small Business and

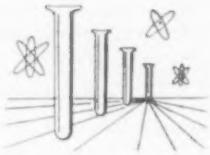
Associations program. This program recently pulled together the promotional work formerly done separately in the interests of associations and of small businesses. The combined effort is more logical, and is expected to result in greater economy and efficiency, inasmuch as safety is a national factor in the service programs of associations.

As a case in point, a joint project of the Council with the American Hospital Association now carries technical and training information and materials each month to 836 hospitals.

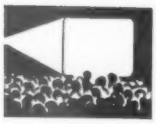
Research

Increased research is the necessary basis for further progress in controlling some hazards.

With the American Society of Safety Engineers, the Council sponsors various research projects on subjects of major importance to accident prevention in industry. One such project, Safety Belts, Harness and Accessories, was completed this year, and the report prepared for publication. A prospectus is being prepared to marshal support for a study of nondestructive methods of testing wire rope.



Training Aids



FILMS

A series of five films entitled "Personal Side of Safety" was produced this year. The films deal with attitudes in safety, and are directed to workers. The set will be available on both 35 mm sound slidefilms and 16 mm simulated motion films.

SAFETYGRAPHS

Three more of these popular easel talks were produced this year: #19—Static Sparks and Flammable Liquids, #20—Off-the-Job Safety, #21—Save Your Own Skin.

BOOKLETS

A total of seven new booklets for creating interest of employees in safety have been completed: Aren't People Funny?, K. O. Dirt & Disorder, Go Fly a Kite, Have Fun, Still Waggin', A Wise Bird Follows the Rules, and Heave-Ho. Preliminary work has been done on three other employee training booklets.

OTHER AIDS

A second volume of the Five Minute Safety Talks for Foremen was published this year. Message for Woods Bosses, printed in both English and French, also was prepared for the Wood Products Section. New Safety Instruction Cards for the year numbered 32.

the outlook:

The war economy which has been forced upon the nation recreates the same special safety problems encountered during World War II. It also recreates the same pressing need to conserve manpower for warpower—this time even more acutely because the nation's unused manpower reserves are at an all-time low.

Rapidly expanding and changing facilities and operations, new workers, overtaxed safety facilities, and just plain "jitters" will create more accident situations. At the same time, injured workers will be harder to replace and will be a burden on already overtaxed medical facilities.

But the picture is really brighter than that of 1941, because the size and cooperative strength, the vigor and the organization of the nation's safety resources is infinitely better now than a decade ago. None can afford to relax, but all can feel that the challenge can be met by intelligent hard work.

School and College safety

the problem:

11,000 DEATHS in the 5 to 19 age group

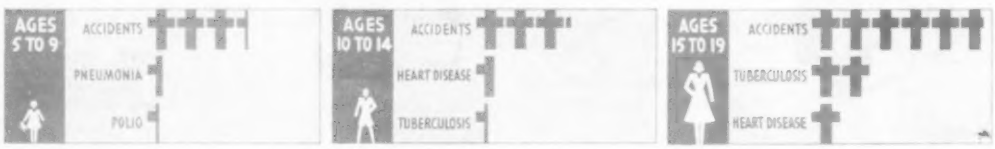
THE 1950 TOLL . . .

250,000 INJURIES in motor vehicle accidents and an even greater number in other accidents

Accidents are the leading cause of death to children. Two out of five in the 5 to 19 age group who died last year were victims of accidents. Accident deaths of children exceed the combined totals of the 10 most important diseases.

Motor vehicle accidents are most frequent in all child age groups, but drowning, fires, firearms and falls are also major causes of death.

CHIEF CAUSES OF DEATH OF YOUNG PEOPLE



Source: National Office of Vital Statistics data, 1948. Each symbol represents 1,000 deaths

the program:

The function of safety education is to help individuals to understand—and then eliminate or compensate for —their deficiencies and to provide them with opportunities to acquire the attitudes, skills and knowledge essential to their safety.

Primary responsibility for all phases of safety education at all educational levels rests with school authorities. Only they can provide safe school plants and safe transportation, trained personnel to plan, present and evaluate the program, and a place for safety education in the total school program.

The School and College Division's responsibilities are:

1. To gather and disseminate information on safety education problems.
2. To help solve the problems in specific areas of instruction.
3. To give nation-wide publicity to the problems and solutions.
4. To stimulate others to participate in the efforts to reduce accidents to children and youths and, wherever possible—coordinate these efforts.

the progress:

Since 1922, when organized efforts for child safety began, the accident death rate in the 5 to 14 age group has decreased 45 per cent. Accidents in the 15 to 19 age group have increased 6 per cent during the same period. Safety education has been much more widely accepted in elementary schools than in secondary schools.

Consultation Services

During the 1950-51 school year 13,000 requests for safety education information were answered. Such requests numbered 11,800 in 1950 and 10,800 in 1949.

School and College Division staff members spent 156 working days in 33 communities to help plan programs and consult with school safety workers.

School Memberships

School memberships for the 1950-51 school year numbered 1,341 as compared with 1,242 for the previous year—an increase of 8 per cent.

A greater proportion of these memberships cover entire school systems, providing a much wider spread of influence than the previous single-school membership plan.

Subscriptions for SAFETY EDUCATION magazine, the only national magazine devoted exclusively to school safety, now total 7,400—mostly from school administrators.

1,134,558 lesson units and 205,173 school safety posters were distributed during the year. Nine new Data Sheets for teacher use as resource material were produced, bringing the total to 54. More than 55,000 news letters for specialized interest groups were circulated.

National School Safety Honor Roll

This Honor Roll is the Council's way of awarding recognition to schools with well-rounded safety programs. It also suggests how schools can better meet all student needs in safety, and to arouse interest in safety. In 1949, 76 schools received Honor Roll Certificates; in 1950, 173; in 1951 approximately 220 schools will receive them.

Section and Committee Activity

Activities of the School & College Division are conducted through three Sections and seven major committees. These groups, made up of hundreds of teachers and administrators actively interested in safety, are organized and staffed by the council.

Following is a list of these groups:

Safety Education Supervisors Section
Elementary School Section
Driver Education Section
Secondary School Committee
Higher Education Committee
AVA-NSC Joint Safety Committee
School Shop Safety Services Committee
Standard Student Accident Report Committee
School Plant Planning Committee
School Transportation Committee

Cooperative Activities

Council staff representatives participated in the National Conference on Safety in Colleges and Universities, and the planning meeting of the National Conference for Safety in the Elementary School, sponsored by the National Commission on Safety Education of the National Education Association. The council is also cooperating with the Roy Rogers National Elementary School Safety Awards in which 8,000 schools participate.

the outlook:

An evaluation of the School and College publications program is being made through local conferences with school administrators and teachers in various parts of the country, to determine methods of presenting safety information to schools in the form most useful to the greatest number.

Continuing progress lies in convincing school administrators that accidents are a serious threat to the lives of children, that safety is an important element in education, and that large reductions in child deaths can be achieved through cooperative effort.

Traffic safety

the problem:

THE TOLL — 35,000 TRAFFIC DEATHS

1,200,000 INJURIES

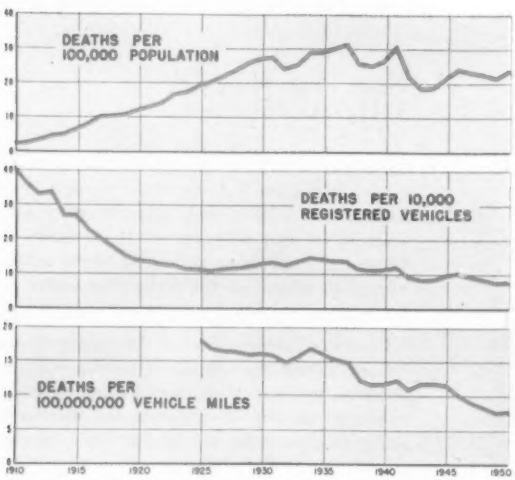
THE COST — $3,100,000,000

the program:

The National Safety Council has been active in traffic safety since 1916. The Council's Traffic & Transportation Conference, as now organized, was established in 1948 following the first President's Highway Safety Conference and provides the machinery for voluntary operational coordination. It has taken on the job of strengthening weak points and filling voids in the national program of traffic accident prevention. It does this by:

1. Developing information and materials for aiding official and other agencies responsible for safety.
2. Cooperating with all other groups engaged in accident prevention, directly and through joint committees.
3. Acting as chief national agency for collecting and analyzing facts on traffic accidents and prevention programs.
4. Giving technical assistance in other Council activities involving traffic safety.

Trends in Motor-Vehicle Deaths



the progress:

The traffic death rates based on miles of travel and numbers of vehicles show consistent reductions. The rate based on population, while erratic, has been at a lower level in recent years.

There has been a six per cent increase in the number of Traffic Safety memberships in the past year.

PUBLIC SAFETY magazine, the official Council periodical for the Traffic & Transportation field, is now received by 12,700 officials, commercial fleet operators and others interested in traffic safety.

Annual Inventory of Traffic Safety Activities

The Annual Inventory measures the safety programs of cities and states. It is administered by the Council for the President's Highway Safety Conference, and supplies basic information needed for the progress reports of the Conference.

The Inventory provides, upon request of officials, a detailed analysis of the accident prevention program reported by a state or city. The analysis compares the record and the various aspects of enforcement, engineering, education and other activities of the individual city or state with recognized national standards and with other cities or states with similar characteristics.

Reports were received for 1950 from all states and more than 700 cities. An individual analysis has been prepared for all of the 48 states and for over 600 of the cities. Approximately 75 per cent of the cities which have received Analysis Service in the past have shown improvement in their traffic safety activities. The Inventory is supported by a grant from the Automotive Safety Foundation.

The Inventory also provides an incentive for improving accident experience and programs through awards. This part of the Inventory is known as the National Traffic Safety Contest.

Cities receiving Analysis Service in 1951.

Operation Safety

Operation Safety is based on a national plan to help national, state and community organizations build successful public safety education programs by coordinated emphasis on a set of 12 specific monthly themes.

Continuity of effort plus a shifting of emphasis sustains public interest at a high level. All major aspects of traffic safety are highlighted for one month of each year. Operation Safety is a guide and a plan, provided in monthly kits of program aids issued by the Council through membership or on subscription. A total of 20,400 kits has been supplied in the past year.

The program was developed and is guided by the Council's Public Safety Education Committee, made up of state and local safety people, plus traffic safety and public information specialists. The project is parfially supported by the National Association of Automotive Mutual Insurance Companies.

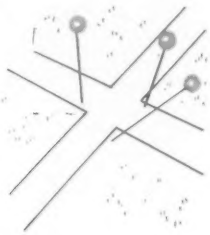
Regular kit materials have been supplemented by 24 one-minute film trailers for television and theatres, and basic training for safety workers has been provided through safety education courses held in cooperation with the National Committee for Traffic Training.

Operation Safety is a rallying point for community organization. Under the leadership of a local safety organization, various civic groups are invited to support specific programs for one or more months. An outstanding degree of cooperation among all types of groups has been achieved in many communities.

Signs of Life

Signs of Life is an educational progam for greater knowledge of and respect for highway signs and signals, with special emphasis on highway rail intersections. A series of five-minute transcribed programs is being used by more than 1100 radio stations and a series of three film trailers is being used by all TV stations. Hundreds of thousands of leaflets, comic books and other promotional materials have been produced during the year, and special promotion kits furnished to 2,000 officials and railroad safety officers. While Signs of Life is a year-around program, it receives special emphasis in the August Operation Safety program. A portion of the contributions to the Trustees' Green Cross Fund by the railroads makes possible this program.

Accident Records



A good accident records system is vital for a well-rounded and well-directed safety program. The Council helps states and cities by developing standard forms, statistical procedures, analysis methods and uses of accident data. Training is given to state and city accident records bureau personnel. Manuals, technical memoranda, model forms and summaries are prepared and circulated. The expense of this program is underwritten by the Association of Casualty and Surety Executives.

Tests for Intoxication

The Council is active in developing and promoting improved techniques for identifying the drinking driver. This work has been directed by a technical committee, now more than 15 years old, which includes some of the best known scientists and technical men in the country. Chemical tests have been thoroughly verified, and have been endorsed by the American Medical Association, the American Bar Association, and the International Association of Chiefs of Police.

The program, made possible by a grant from the Licensed Beverage Industries, has been largely promotional in recent years—field work, leaflets, newsletters, articles in technical and popular journals, and the circulation of technical information. Through a re-grant of funds from the Council, Northwestern University Traffic Institute has trained several hundred technicians who are carrying on testing work in their own communities. Chemical tests are now being used in more than half the states and in more than 165 cities.

Winter Driving Hazards

The Council has been interested for some years in the special driving hazards presented by winter conditions. The program, using funds furnished by the Safe Winter Driving League, has taken two forms. One has been the development of educational materials — radio transcriptions, leaflets, news stories, and magazine articles. The January Operation Safety program is centered on winter driving hazards. The other phase of the program involves a number of tests on frozen lake surfaces to discover what special equipment and driving techniques might be recommended for greater winter safety. Currently, work is under way on a pilot study of jack-knifing by tractor-semitrailer combinations.

Joint Activity

Joint Committee activity has been productive, especially in establishing standards. The Council has long been active in the National Committee on Uniform Traffic Laws and Ordinances, and a staff member is currently chairman of the committee. This group developed the Uniform Vehicle Code and the Model Traffic Ordinance. The Council also has worked for uniformity of signs and signals, through the Joint Committee on Uniform Traffic Control Devices. The National Conference on Uniform Traffic Accident Statistics, with a staff member as secretary, has produced the Manual of Definitions of Traffic Accidents, a model report form, and a manual on records use.

Perhaps the outstanding example of cooperative effort exists in the Traffic and Transportation Conference itself. Here is an example of planning by many national agencies in an effort to cover all aspects of the traffic accident prevention program with a minimum of duplication.

the outlook:

A review of traffic safety activities and needs, prepared by the Traffic and Transportation Conference, indicates clearly that there are serious weaknesses and many holes in the line of defense. Major attention is called for, especially in training, surveys, and assistance activities. Much remains to be done in public education. Members of the Conference and others must work seriously and vigorously to strengthen the weak points and plug the gaps.

Traffic accidents can be reduced substantially below the present level. To do this the Conference needs:

1. Better basic information on underlying causes.
2. Improved techniques for dealing with those causes.
3. More intelligent and purposeful official action and public support at the state and local levels.

However important the first two points, traffic deaths could be reduced 50 to 60 per cent by an effective application of what is now known, as suggested in the third point above. This is the area in which the Traffic and Transportation Conference has made and will continue making its greatest contribution.

Commercial Vehicle and Transit safety

the goal:

Approximately 12 per cent of the 48,000,000 registered vehicles in America are operated by professional drivers. The safe driving performance of these employees can largely be determined by the employer, through his procedures of hiring, training, supervising and disciplining his employees. The goal of the Commercial Vehicle and Transit Sections of the National Safety Council is to reach all employers of professional drivers and provide them with effective tools for conducting aggressive accident prevention programs.

the attack:

Prior to 1951 commercial fleet safety work was handled by the Motor Transportation Bureau as a subdivision of the Traffic & Transportation Division. In recognition of the rapid increase in the number of fleet operators who have joined the Council in recent months and to better serve their needs, the bureau was up-graded on the Council's organization chart and renamed the Commercial Vehicle & Transit Division. The new devision will continue to participate in the Traffic & Transportation Conference.

The activities of the Commercial Vehicle & Transit Division come under two major headings:

1 **Technical and administrative assistance for fleet supervisory personnel.**

2 **Sponsorship of projects for developing among professional drivers the abilities and attitudes necessary for safe driving.**

Technical and Administrative Assistance

THE FLEET SAFETY MANUAL

This publication is recognized as a standard guide for the administration of an automotive accident prevention program. Published in sections to permit distribution of pertinent material to various key personnel, the 1950 revised edition was enthusiastically received throughout the country. Three additional sections were published and distributed to members in recent months: Part V—Rules of the National Fleet Safety Contest, Part VI—Safe Driver Award Rules, Part VII —Garage and Repair Shop Safety.

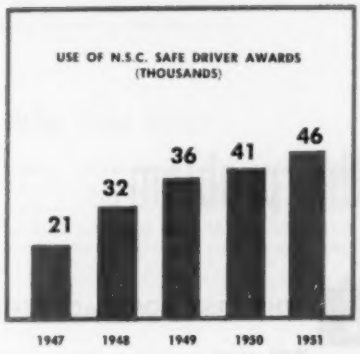
CONSULTATION SERVICE

In the past year Council staff members served as instructors in fifteen fleet supervisor training courses throughout the country. Division representatives participated in the fleet safety work at twenty local, state and national safety conferences. Extensive on-the-spot consultation was carried on with local safety organizations concerning their motor transportation programs, and with many individual companies in the localities visited. Approximately 2,000 calls for assistance were answered by the division's fleet safety engineers with consultation letters and reference material.

Driver Education Activities

SAFE DRIVER AWARDS

Use of the National Safety Council's Safe Driver Award Plan has mushroomed during the past year. It has been firmly installed as the nationwide method of recognizing professional performance. The award serves as a potent incentive for all commercial vehicle drivers and operators, since it is known and recognized as the nation's highest award for professional safe driving. A central records system, maintained at Council headquarters, insures the integrity of the award and provides a clearing house for the safe driving records of commercial vehicle drivers.



CONTESTS

All-time highs of participation have been reached in the four national contests conducted by the division: The National Fleet Safety Contest (driving safety), the Commercial Vehicle Safety Contest (all employee safety), the Transit Safety Contest, and the Miles Per Accident Contest. These contests are an effective interest-sustaining activity for the participants, and are a method of obtaining valuable statistical information.

PERIODICALS

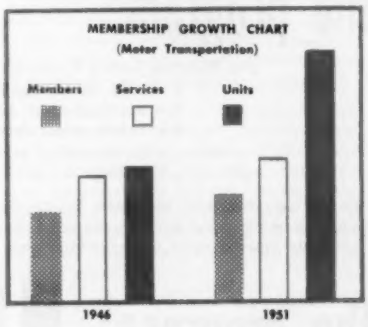
Circulations of the publications included in the Council's Driver Service are currently exceeding all previous totals. Cumulative circulations for the past 12 months are: SAFE DRIVER Magazine, 2,550,000 copies, "A" size posters, 274,000, "B" size posters, 759,000. A total of 1,455,000 Dash Cards (an optional service) were purchased.

NEW PUBLICATIONS

A 24-page driver training booklet entitled "The YOU Factor in Accident Causes" was announced to the membership in May of this year. Work on a new Safetygraph entitled "Your Margin for Safety at Intersections," and a new sound slidefilm for driver training entitled "Smooth Operation" has been completed, and both items are now available.

MEMBERSHIP GROWTH

The chart at right graphically illustrates the growth of the Commercial Vehicle & Transit Division. Companies which hold other types of membership—usually Industrial—but subscribe to the Complete Motor Transportation Service are considered members of the division for all purposes except key membership counts. The growth of Administrative Unit subscriptions indicates a general increase in the number of terminals or separate locations receiving all or part of the complete service.



the outlook:

The Commercial Vehicle & Transit Division has no problems that cannot be eliminated by a healthy increase in the number of fleets holding Council membership.

Operating under a membership income structure, the development of new projects and the improvement of existing activities and materials must be keyed to the ability of the membership to make the services self-supporting within a reasonable period of time.

A vastly greater program of new membership acquisition will get under way in the latter part of this year, and continue throughout 1952 and 1953. The new members thus obtained will give new strength to the jointly-conducted activities, and make possible the development of new and specific materials for supervisors and drivers.

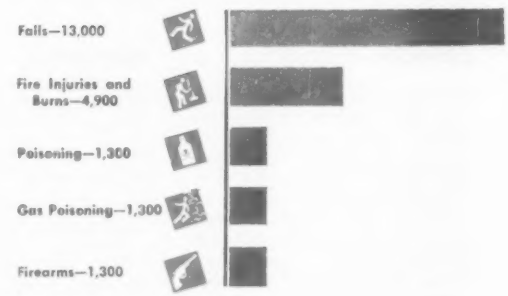
Home safety

the problem:

THE 1950 HOME ACCIDENT TOLL

- 27,500 killed—mostly children under 5 and adults over 65
- 4,100,000 disabled by injury, with
- 110,000 permanently impaired
- $600,000,000 lost in unearned wages, medical expense, and insurance overhead, plus
- $200,000,000 in property damage from home fires

Principal types of fatal home accidents



the program:

The National Safety Council's home safety program is aimed toward:

1 — safe home construction and equipment
2 — accident-alert adults
3 — safety-wise communities

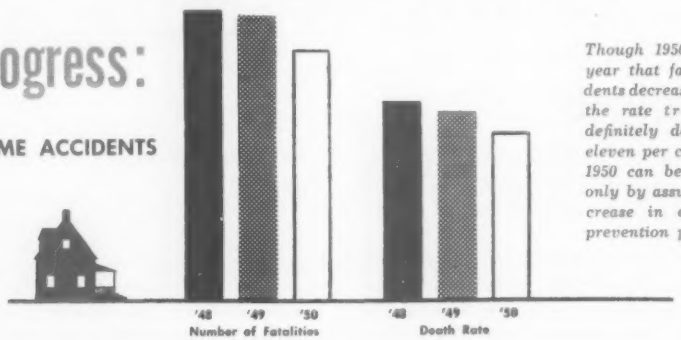
. . . through the combined efforts of the many national, state, and local groups and agencies whose help is essential.

In the last year, with the Home Safety Conference's adoption of a national program, the prevention of home accidents entered upon a new and promising phase.

Under each of the above three main targets is a group of related goals—pinpointed by specific jobs with certain groups to cooperate in their accomplishment.

the progress:

HOME ACCIDENTS



Though 1950 was the first year that fatal home accidents decreased appreciably, the rate trend has been definitely downward. The eleven per cent decrease in 1950 can be accounted for only by assuming some increase in effectiveness of prevention programs.

Industrial Action

Industry has become increasingly aware of its stake in home safety. Aside from the human relations aspect, the annual toll of about 7,000 workers' lives plus the loss of millions of man-hours from disabling injuries have made home accident prevention a top-priority production problem.

The Home Safety Conference teamed up with the Industrial Conference to develop a special packet of public safety materials for industrial programs.

A new Safetygraph on off-the-job safety for workers, dealing mostly with home accident prevention, promises to be one of the most popular in the series.

Safety 'Round the Clock, a new home safety booklet slanted to the worker and his family, has far exceeded its predicted distribution.

The 1951 National Safety Calendar devoted a large share of its pages to home safety, and is being used in more than half a million workers' homes.

Christmas Holiday Safety

An unusual achievement this year has been the preparation of a free Christmas safety packet. The kit includes all the material needed for a complete community program of public education on special holiday hazards, with emphasis on the home. It contains a planning guide, radio scripts, news releases, skits, leaflets, posters and other educational aids.

At least ten states, including 500 communities, will have fairly complete coverage, as will about 100 other cities and towns. A million families will be reached. This service is made possible by a special grant of funds from the New York Community Trust.

Periodical Services

A more comprehensive information service for home safety leaders than the Council can afford to underwrite is now being provided at a nominal cost to anyone interested enough in home safety to share the cost. The service includes information and sample new publications from all known sources of home safety material.

More than 27,000 copies of HOME SAFETY REVIEW, official monthly magazine of the Council's Home Safety Division, were mailed in the past year.

Better Baby Sitters

The eager response to the Baby Sitters Safety Packet has shown the need that is generally felt for training the young parents-by-proxy. An extra dividend also is earned, for the lessons they learn in child protection will hold over to the time when they become real parents.

Public Education

The success of the Council's Public Information Department in obtaining radio and television time and newspaper space devoted to home hazards has grown each year. Home safety articles were carried in 17 national magazines with a combined circulation of 62 million copies in the last year.

The Program Grows

The Council has stimulated interest in home accident prevention among state and local health departments by personal and mail consultation, talks, guidance in research and demonstration projects, preparation of special survey and training materials, and editorial promotion. The American Public Health Association and the United States Public Health Service have contributed greatly to this important development.

The medical profession has also become more actively interested in home safety education, mainly through the efforts of such professional societies as the American Academy of Pediatrics, and the International Gerontological Congress. The pediatricians, with their national child safety committee, have taken hold of the child accident problem with a vigor that promises an early reduction of accidental death and injury in the under-12 age group.

The Council has worked with such organizations by supplying statistical and other basic data, speakers, educational material, publicity and library services.

the outlook:

Most of the state and local services necessary for effective home safety programs at the community level are already available. The need is not for new services but for better organization and coordination, as well as intensifying of effort on the part of those now functioning.

Substantial progress in reducing home accidents can be made in the immediate future if organizations, business concerns, and community leaders accept responsibility through constructive and consistent action —on behalf of their members, employees, families and communities. The Council will continue to lend leadership impetus and assistance to these efforts.

Farm safety

the problem:

Accidents to Farm People in 1950 Caused—

15,500 DEATHS

1,300,000 INJURIES

65,000 PERMANENT IMPAIRMENTS

17,000,000 LOST DAYS

the program:

The five-point Farm Division program of the National Safety Council is a series of balanced activities for reaching every farm and into every farm home with safety messages, techniques and demonstrations designed to avoid fatal and crippling accidents. The five points are:

1 —Develop active State farm safety committees representing all organizations and agencies related to agriculture.

2 —Through the State committees develop, with each organization and agency, specific programs of education including publicity, accident reporting, accident surveys, special group projects, exhibits, demonstrations, lectures, special campaigns, use of literature and visual training aids, meetings and contests.

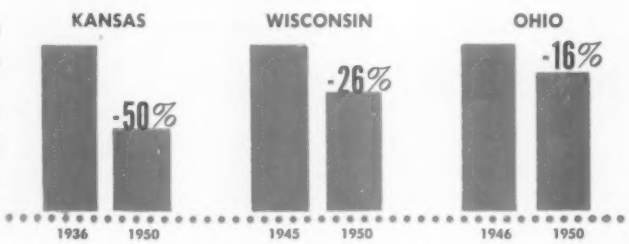
3 —Focus the attention of farm residents on accident prevention by a steady supply of material to publicity channels, and through periodic nation-wide campaigns.

4 —Sponsor educational projects and program aids such as leaflets, posters, visual aids, contests, farm safety conferences and school activities.

5 —Cooperate with traffic safety agencies and with local safety councils and assist in the formation and functioning of farm safety sections within the councils.

the progress:

The charts show how fatal accidents were reduced in three States having farm safety committees, sound programs and good accident reporting systems.



Farm Safety Week

A high point of this year's program was the Eighth Annual Farm Safety Week, established by Presidential Proclamation, from July 22 to July 28. By all measures—leadership, cooperation, material distributed, publicity obtained, and acceptance by rural people—this year's Farm Safety Week broke all previous records.

Through the 48 State chairmen, the Federal Extension Service, the Advertising Council, the State colleges of agriculture, and other associations and groups, nearly 10,000 packets and 1,500,000 pieces of material were placed where most needed.

The Farm Equipment Institute prepared and distributed more than 50,000 posters and streamers. Many State committees and local groups prepared additional material.

The Council's Public Information Department reported 28 network broadcasts, 159 local live broadcasts and the distribution of 445 farm safety week transcriptions. A total of 3,498 mats were distributed to newspapers and magazines which requested them.

The Advertising Council distributed 20,000 kits and 3,500 mats for local sponsored advertising.

The number of meetings relating to Farm Safety Week exceeded 5,000.

Materials

Establishment of a new Farm Safety Service has already resulted in the enrollment of 71 additional Council members.

FARM SAFETY REVIEW, the bi-monthly publication of the Farm Division, is now being sent to 10,000 state extension workers and 15,000 other leaders in agriculture. Much of this circulation is supported by business firms and others who recognize the need for reaching the farm leaders who can make the greatest use of the information.

Nine new Safe Farm Practices leaflets for mass distribution were prepared in the past year. More than 10,000 Spring Clean-Up packets were provided county extension agents and others. Articles were written for the leading farm publications and regular releases were sent to college editors and State supervisors of vocational agriculture.

State Organization

Twenty-seven States now have State farm safety committees, and progress is being made toward organized committees in ten other States through Farm Division efforts.

Twelve States now employ full-time farm safety specialists, and four other States plan to do so in the near future.

During the past year Council staff field assistance was given in 35 States.

The Farm Division sponsors the annual Institute for Farm Safety Specialists, held this year at Iowa State College.

the outlook:

A permanent sponsoring group known as the National Committee for Farm Safety has been set up to help recruit support for this work in a more adequate amount and on a basis that will insure permanency. As the work of this committee progresses, it will be possible to undertake some phases of farm safety that have been long delayed—programs with farm women, exhibits, demonstrations, films, surveys, research and testing, and others. Expansion of the work at an early date to include these needs is important to its continued effectiveness.

Public Information

The Department of Public Information of the National Safety Council has two functions. One is to serve as the publicity agency for the Council, and as such to provide a steady flow of safety information to all forms of public information media. The other function is to produce the Council's own nine monthly national magazines, its posters, its safety calendar, and a variety of other material designed for safety education.

Publicity

the goal: To convince 150,000,000 thrill-thirsty Americans that it's smarter to play it safe than to take needless chances.

the attack: A constant barrage of compelling and dramatic appeals—in every form, through every medium—designed to capture the attention of the public and focus it on the accident problem and how to solve it. The ammunition: newsworthy releases, human interest features, radio transcriptions, network broadcasts, cartoons, photos, contests, awards, special events, seasonal campaigns, catchy slogans, posters, magazine articles, TV films and features . . . and, through the Advertising Council, a continuing and intensive campaign sponsored by advertisers on behalf of the National Safety Council.

the progress:

NEWSPAPERS—In the past year an estimated 900,000 inches of space were devoted to safety in the newspapers of America—89,000 news stories and editorials, 28,500 pictorial and cartoon mat features, and 680 editorial cartoons.

RADIO & TELEVISION—More than 200 network and 260,000 local broadcasts totalling 9,000 hours of radio and television time were devoted to safety last year.

NATIONAL MAGAZINES—Seventy-one articles on safety appeared in national consumer magazines in the past twelve months.

BUSINESS PAPERS—During the year 385 trade publications used 2,800 Council features and stories covering 62,600 inches of space.

EMPLOYEE PUBLICATIONS—A total of 1,545 house organs used 36,800 cartoons, pictures and stories consuming 98,400 column inches.

"STOP ACCIDENTS" PROGRAM

For the sixth consecutive year, an intensive program of sponsored safety advertising was conducted by The Advertising Council in cooperation with the National Safety Council. In the past year the results of this program were: 2,000,000,000 television and radio listener impressions, 37,700 newspaper ads, 108 magazine ads, 18,600 outdoor posters, 79,500 streetcar and bus card ads, 9,300 three-sheet posters, 110 house organ ads, 10,000,000 comic books with safety messages, 42,000,000 road maps carrying safety slogans distributed by 13 major oil companies.

The Advertising Council also cooperated actively in "Operation Safety" and the Motion Picture and Radio Committee of the National Safety Council. News and feature releases produced and distributed by the Advertising Council have featured the National Safety Council.

Motion Picture and Radio Committee of NSC

The following members of this committee have contributed their services in the last 12 months for radio recordings on safety: Eddie Cantor, Roy Rogers and Dale Evans, Jo Stafford, Vaughn Monroe, Lanny Ross, The Sportsmen, Dick Haymes, Ralph Flanagan, Doris Day, Perry Como, Guy Lombardo, Phil Harris and Alice Faye, Gloria De Haven, James Melton, Harry Von Zell and Margaret Whiting.

Child Safety Campaign

The nation's top high school choirs were featured in an NBC network series of 17 broadcasts entitled, "Green Cross Song Festival." This was in cooperation with the Council's local chapters. Roy Rogers' annual nationwide school safety contest was an important feature of the campaign.

National Farm Safety Week

The eighth annual observance of the week exceeded all previous years in public interest and support. The theme was set by President Truman in an official proclamation emphasizing the need for adopting safe practices. The week was launched by coast-to-coast broadcasts over the NBC, CBS and ABC networks. A special transcribed program was broadcast by 448 radio stations. Nearly 4,000 mats of farm safety features and cartoons were distributed to newspapers requesting them. Awards were made by the Council to 12 farm magazines and 17 radio stations for exceptional service to farm safety.

Holiday Safety Campaigns

These campaigns reached an all-time high of activity and public interest in the past year. In addition to the usual intensified programs for Christmas and Fourth of July holiday safety, the publicity efforts were stepped up for the Memorial Day, Labor Day and New Year's holidays. The Council's holiday toll estimates are receiving steadily increasing attention by the press, radio and public.

Millionth Traffic Death

The fact that the millionth traffic death in the United States since the advent of the automobile is expected this December provides one of the most dramatic and "natural" news events in the history of safety. An intensive program is being based on it. Other organizations—The Advertising Council, the Association of Casualty and Surety Companies, the Inter-Industry Highway Safety Committee, to name a few—are cooperating actively. The goal is to postpone the millionth death as long as possible.

Awards

The Alfred P. Sloan Radio Award for Highway Safety was administered this year by the National Safety Council with the advisory support of the Automotive Safety Foundation. The Award went to eleven recipients.

Public Interest Awards are the Council's official "thank you" to public information media for exceptional service to safety. In the past year 151 awards were presented.

Editorial Division

The Editorial Division of the Public Information Department is responsible for producing the Council's nine national magazines. In the 12 months ending October 1, 1951, the total monthly circulation of these magazines averaged 768,000. The gross annual revenue to the Council from the magazines was $649,358.

Art Division

The Art Division of the Public Information Department provided art and photographic work for all the Council's magazines, posters, dash cards, safetygraphs, ACCIDENT FACTS and all other miscellaneous publications.

Poster Division

This division of the Public Information Department is responsible for the production of all posters distributed by the Council. In the past year 265 new posters were produced. Gross revenue from poster sales amounted to $434,967 for the last 12 months. The Council exhibits shown at the National Safety Congress also come under the supervision of the division.

Local and State Organization

safety

the problem:

To combat accidents where they are occurring, there must be effective organization of all the groups and interests required for a unified and competent job at community and state levels.

the program:

The Field Organization Department is concerned primarily with activities that lead to the most effective application of accident prevention measures at the "grass roots" in all fields.

The objective is to weld local units and headquarters into one unified safety force. The National Safety Council looks to local organizations for application of approved techniques, as well as for advice on the practicability of proposed measures. Locals look to the National for leadership, exchange of ideas, technical information, safety publications, educational and promotional materials.

Neither can do its job without the other. Since each draws its strength from the same people and organizations, their aims and purposes are best served by a strong, coordinated national safety movement.

the progress:

The Conference Plan

Work of the department conforms with the Plan of Relationships with Local Safety Organizations approved by the Board of Directors October 25, 1949. Administration of the plan is one of the most important functions of the department.

Organization of Chapters

Eighty-one chapters are now chartered by the National Safety Council. In addition, membership service is provided to 150 other local safety organizations. During the past four years 25 new community chapters and five new state chapters have been organized and are in operation.

Chapters of the National Safety Council. State chapters are shown in white.

FUNCTIONS AND SERVICES

A primary function of the Field Organization Department is the creation of new Chapters and constant assistance in upgrading established Chapters.

The department's consulting services for chapters include guidance, data and materials aids on organization, management, finance and program. In addition to field visits it also:

1—Prepares special Green Cross promotional materials for chapters conducting financial campaigns.

2—Issues the monthly Community Council Newsletter.

3—Provides all Class "A" (full-time manager) chapters with comprehensive safety libraries, and keeps them up to date.

4—Gives training at Council headquarters to new chapter managers.

5—Participates in conferences and other local and regional activities.

During the past eighteen months members of the department staff made 341 field visits and 300 speaking appearances in support of community and state safety work. Approximately 3,000 requests for assistance from civic groups, official agencies and individuals were answered and full information given.

Upon request, representatives of the department consult with committees of state legislatures, municipal authorities, and citizen leaders working on improvements in safety legislation.

Staff members of the department participate as faculty members in training institutes, such as those at Northwestern University, University of California, and University of Louisville.

REGIONAL OFFICES

The Council's Regional Offices in San Francisco and New York operate under the direction of the Field Organization Department. These offices act in cooperation with all departments as official representatives of the Council in its various national activities, its contacts with the membership, and in the promotion of sound public relations.

WOMEN'S ACTIVITIES

An estimated 22,000,000 women belong to women's clubs and organizations. The purpose of the Field Organization Department is to reach these women with information on all aspects of safety.

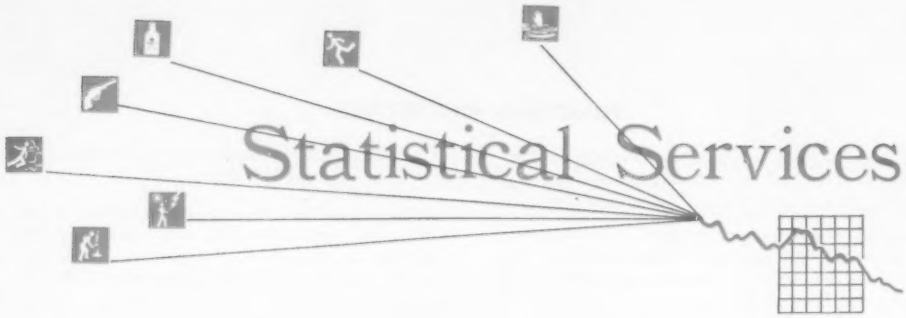
Under the guidance of an advisory committee, the staff maintains contacts and correspondence with national women's organizations, providing them with ideas that stimulate safety activities and assisting them in their safety programs.

A bimonthly newsletter and a monthly fact sheet are being published for the use of women's groups. Aid is also given to women's safety committees which are organized in state and community safety councils.

the outlook:

Because of the limited staff and funds available for community safety work, the efforts of the Field Organization Department are spread principally among the communities where the need is most serious and the degree of local interest is greatest.

The liaison maintained with the staff of the Annual Inventory of Traffic Safety Activities and with the National Committee for Traffic Safety is most helpful in locating the communities where safety councils could and should be organized and supported. The number of such communities is both appalling and encouraging—appalling because of the limited resources and consequent slow pace of current progress, encouraging because the needs are clearly defined, and can be met by extending the scope of the Council's community safety work.



Statistical Services

the goal:

Accident prevention efforts, to be effective, must attack the basic causes of accidents at the time and place, and under the conditions which produce accidents.

The primary objective of the Statistical Division is, therefore, to collect and analyze accident information, and help others to do so, to answer the questions:

who gets hurt?
where and when?
how?
why?

A secondary objective is to collect accident frequency and exposure data to determine rates and measure progress or lack of progress in organizations, groups, geographic areas, and for the nation.

the attack:

The Statistical Division has historically held a position of leadership in developing standard methods of tabulating and analyzing accident information. Standard methods are promoted in the Council's periodicals, by its manuals and pamphlets, and by classroom instruction.

Standard methods developed by the Council in cooperation with others in the particular field include:

Manual of Definitions of Motor Vehicle Accidents.

Methods of summarizing traffic accidents in cities and states.

ASA Standard Methods of Compiling Industrial Accident Rates and Causes.

Standard Student Accident Reporting System.

All Accidental Death Summary for Vital Statistics Agencies.

The Statistical Division compiles the following annual reports:

Accident Facts, a 96-page summary of the latest available information on all types of accidents. The salient points in the annual summary are also published in Condensed Editions, stories for Council periodicals, and Farm, Home and School Fact Sheets.

Accident Rates Pamphlets for major industrial and transportation groups, which show rankings of 8,500 units classified in 42 major industries.

Distinguished Service to Safety Award computations on the above records.

Traffic Inventory and Award computations for all 48 states and 700 cities.

Railroad and Airline Award computations.

Monthly reports are compiled by the Statistical Division, as follows:

All Accident Death Bulletin and the "Accident Barometer" page of NATIONAL SAFETY NEWS.

Traffic Death Bulletin and article for PUBLIC SAFETY magazine.

23 Contest Bulletins summarizing reports from 5,500 contestants.

Student Accident Summary
Special and seasonal studies are prepared, for example, holiday death estimates and summaries of detailed experience in an industry.

Information and consultation is given in reply to thousands of requests, both from within and without the Council, for various kinds of statistics, for help in the preparation and interpretation of reports and for the preparation or review of articles.

Library Services

the goal:

The National Safety Council Library attempts to collect all the worthwhile information on accident prevention, fire protection, and industrial hygiene, and make this information available to anyone who seeks assistance.

the progress:

The Council maintains the largest safety library in the world. It consists of approximately 3,000 books or volumes and 300,000 pamphlets, articles, folders, photographs and other forms of information.

The library receives an average of 500 magazines each month which are checked, routed, and clipped. New publications on safety are constantly added. These include not only Council materials, but copies obtained from all other sources. All of these are promptly classified or cataloged and made ready for circulation.

The library serves both Council members and headquarters staff. During the past year the library supplied answers to more than 10,000 questions, the greatest number from industrial members, a great many from the traffic and public safety fields. Many requests were filled for photographs to illustrate newspaper or magazine articles or safety chapters in text books. There is also a frequent demand on the trade catalog file to answer questions on safety equipment.

The services of the library are extended to all parts of America and Canada and frequently to Europe, South America and Australia.

Membership Services

the goal:

The objectives of the Membership Department are:

1. to help Council members get maximum benefit from their affiliation, and
2. to extend the Council's facilities and services to all whose participation is needed in the national accident prevention crusade.

the attack:

The Membership Department devotes the bulk of its staff time and budget to keeping members informed about Council services and suggesting methods of use, to tailoring the services of members to suit their individual needs, and in striving to maintain accurate, up-to-the-minute service records and mailing lists.

Among nonmember organizations, interest in the Council's work is won by mass mail appeals, publicity in business publications, traveling exhibits, correspondence, promotions by trade groups, and the personal efforts of Section Executive Committeemen and other members.

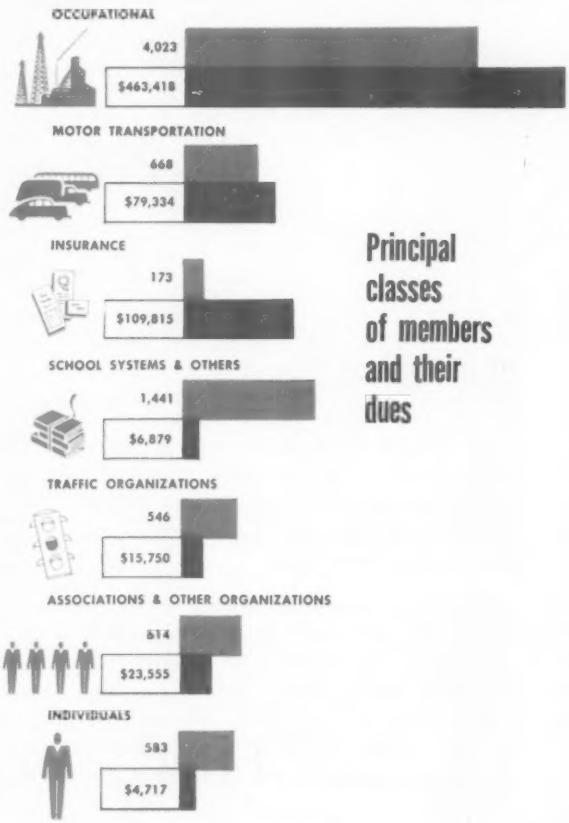
the progress:

Today the National Safety Council has 23 different types of membership and a great number of variations in service plans to meet the safety needs of every type of organization or individual.

Safety services are supplied to approximately 25,000 different plants, offices and terminals operated by the Council's occupational, insurance and motor transportation members.

Federal Government personnel—over 4,000,000 military and civilian—benefit from Council services through a separate contractual arrangement in lieu of, but equivalent to, membership. Federal safety staffs take an active part in Sections, Committees and other activities.

Almost 250 foreign safety groups, government agencies and others regularly receive Council publications through memberships. This figure is in addition to our 300 Canadian members who participate in the Council's work as freely as if the border did not exist.



Principal classes of members and their dues

Standard, automatic services usually fill the needs of members whose operations are small or very similar to many others in the same field. For members with diversified or decentralized operations, or other special problems, tailor-made service arrangements are developed.

More than 210,000 major service directories and 600,000 other descriptive flyers were circulated in the last 12 months to keep members informed of Council resources. These went out in 33 mailings to industrial contacts and numerous mailings to other groups. A total of 560,000 package and newsletter promotional enclosures were used.

Promotions of the Membership Department Staff in the past year, coupled with the crusading efforts of Council members, added 1,080 new members to the roster and $40,960 to dues income.

Despite these extensive programs, the 1950 total salary, printing and mailing cost for new membership and service promotion was just 5% of dues and sales income.

During the current year mechanical tabulation is being applied to membership records for purposes of economy, better service reports to members, and reduced errors. The addressing unit, maintaining 194,000 plates, is also installing more efficient equipment.

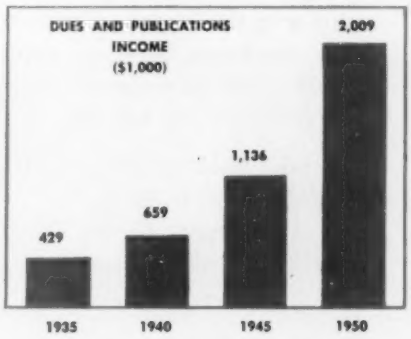
Despite the best efforts of the member committees creating program aids and of the service staff, some members decide to cancel their memberships. The great effort which has gone into discovering and correcting the basic causes of cancellations has paid off in a drop of the cancellation rate from 10% in 1946 to 3% in 1950. This means the average member will stay in the Council 32 years!

As the Council has grown, its publications and services have kept pace. More than 4,200 different booklets, posters, pamphlets and other publications are currently available. A 5-year comparison shows:

	1945	1950
Posters available	580	1,030
Booklets and Leaflets	29	89
Sectional Newsletters	25	36
Foremanship Film Series	1	3
Other Films	43	65

plus new items such as Safetygraphs, Detail Sheets, Safety Decals, Farm Safety Leaflets, Safety Education Data Sheets and many, many others.

New memberships, and consequent increased services, have enabled the Council to hold postwar price increases to 19% less than the increases in the printing industry generally, with the exception of posters which were already mass-produced and were forced to keep pace with paper and printing markets.



looking ahead:

Plans are laid and action started on a greatly accelerated program of acquiring new Council members. The addition of many new members will benefit present members by:

* wider exchange of experience, permitting the development of better preventive techniques.
* broadening the support for research programs.
* spreading the use of training materials and thus lowering their cost and increasing the variety of training aids available for specialized fields.

The plans will need help on the "home grounds," so all Council members will be called upon to join the crusade.

Office Services

The National Safety Council's Service Department performs a variety of functions that are helpful to Council members.

All preparations for the annual gathering in Chicago of 10,000 National Safety Congress delegates are handled by the department, in cooperation with the Planning Division. Reservations, meeting rooms, exhibitions, luncheons, banquets, entertainment and other facilities are so well provided that the Congress is reputed to be the most smoothly run "big" convention in the country.

The job of selling and servicing advertisements for NATIONAL SAFETY NEWS, PUBLIC SAFETY, and SAFETY EDUCATION magazines, and exhibit space for the Congress Exposition is handled in the department. Gross revenue from these sources was $247,575 in the past year.

The Service Department handled the printing contracts for 75 million pieces of safety material requiring 1,200 tons of paper last year. More than 8,000,000 safety posters were printed in the Council's own plant, and the average reprint time for posters was reduced to four working days.

The department also handles the stocking and shipping of the 4,200 different safety items produced by the Council. It processed approximately 480,000 pieces of incoming mail, and ran 9,624,313 impressions from duplicating stencils. These 12-month figures show why the Council is one of the largest users of the mails:

1,484,296 pieces of outgoing First Class Mail
344,737 pieces of outgoing Third Class Mail
349,957 separate orders filled
170 tons of express and freight shipped
10,765 sacks of mail to the post office

The above figures do not include the Council's monthly publications, films, promotional and miscellaneous mailings handled by commercial mailing houses.

Office Views

NATIONAL SAFETY COUNCIL

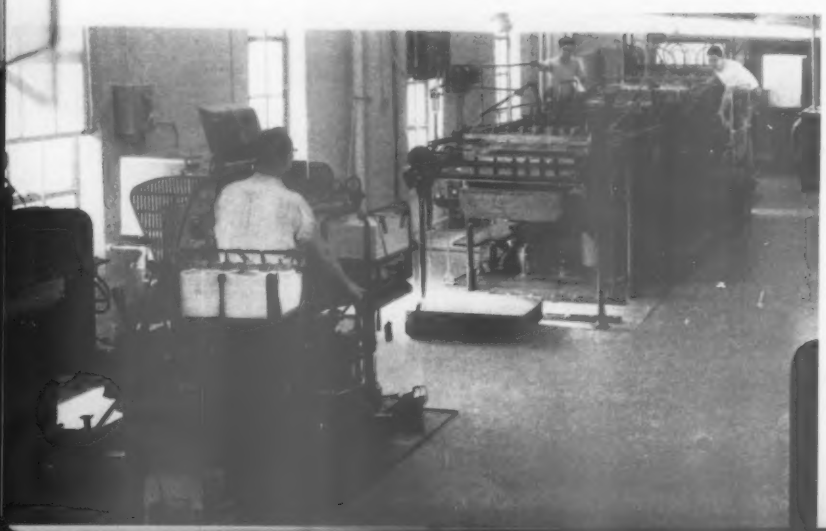
The headquarters staff of the National Safety Council was moved to 425 North Michigan Avenue in May, 1950. Occupying the entire fifth floor of the Mandel-Lear Building, the new quarters provide 63,000 square feet of space; enough so that all departments can be located on one floor. Greatly expanded stock and shipping facilities, modern, adequate office space, and a lower per-foot rental rate were the principal reasons for relocating Council headquarters.

The West Room, where much of the program and technical staff of the Council is located.

The Council Library—the world's largest collection of safety information.

Public Information Department. Here are located the publicity staff, poster division, art division and editorial division.

The Membership Department's record bureau (foreground) works closely with the Accounting Division (background) which handles the financial administration of almost $3,000,000 income and expense annually.



A section of the Council's print shop, where 8,000,000 safety posters and many other publications were produced last year.

The order unit, shown here in part, filled 349,957 orders for safety material last year.

The shipping unit last year prepared 170 tons of express and freight for shipment to Council members.

A portion of the Council's mechanical tabulation equipment, shared by the Statistical Division, Accounting Division and Membership Department.

The Dispensary serves the Council's staff of 277 persons.

Trustees

1950-51

NATIONAL SAFETY COUNCIL

chairman of the trustees

William A. Irvin, Member, Finance Committee and Board of Directors, United States Steel Corporation

secretary of the trustees

Ned H. Dearborn, President, National Safety Council

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Member, Finance Committee and Board of Directors, United States Steel Corporation

GEORGE E. LEIGHTY
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HORACE P. LIVERSIDGE
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Philadelphia Electric Company

GUSTAV METZMAN
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The Sperry Corporation

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President
Congress of Industrial Organizations

BENJAMIN O'SHEA
Member, Board of Directors
Union Carbide and Carbon Corp.

THOMAS I. PARKINSON
President, Equitable Life Assurance Society of the United States

W. S. S. RODGERS
Chairman, Board of Directors
The Texas Company

WILLIAM A. SIMPSON
President, William Simpson Construction Company

HERBERT E. SMITH
Member, Board of Directors
United States Rubber Company

JOHN STILWELL
Yonkers, N. Y.

ARTHUR E. STODDARD
President, Union Pacific Railroad Co.

JUAN T. TRIPPE
President
Pan-American Airways System

THOMAS J. WATSON
President
International Business Machines Corp.

C. E. WILSON
President, General Motors Corporation

CHARLES DEERE WIMAN
President, Deere and Company

ROBERT W. WOODRUFF
Chairman, Executive Committee
The Coca-Cola Company

The public service part of the Council's work is financed partly by contributions and special grants sought under the auspices of the Council's trustees, and partly by the Council itself out of income from other sources.

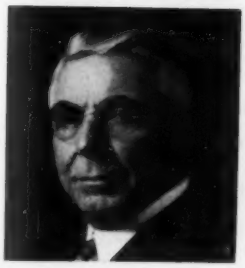
Last year contributions and grants for this work amounted to $526,510 and the cost of the work was $807,300. The difference was made up by the Council out of income from dues and sales.

Contributions (which are deductible for tax purposes) ranged from $25,000 down to $25 in size and came from companies in practically every field of business and industry throughout the country.

Officers

OCTOBER 1950 to OCTOBER 1951

NATIONAL SAFETY COUNCIL



Chairman of The Trustees—William A. Irvin, Member, Finance Committee and Board of Directors, United States Steel Corporation.

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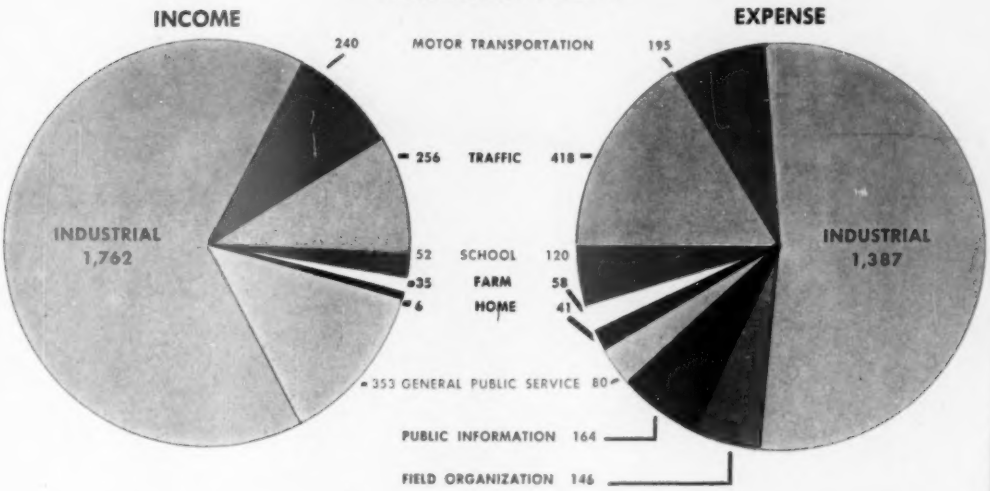

INCOME AND EXPENSE

	Year 1950	*Trend in First Seven Months, 1951*
Income		
Dues, publications and services	$1,990,755	+ 9%
Contributions	526,510	+13%
Advertising, Annual Congress, and Miscellaneous	304,095	+15%
	$2,821,360	+10%
Expenses		
Outside Publication Costs	$ 687,791	0%
Research and Program Activities	664,818	+ 4%
Membership Promotion, Sales and Services	567,991	+13%
Local Chapter and Council development	117,403	— 7%
Publicity	115,230	— 9%
Contribution solicitation	71,353	+ 1%
General and administrative*	499,450	—29%
	$2,724,036	— 3%
Excess of Income over Expense	$ 97,324	

* Including moving and related expenses of $91,432

ASSETS AND LIABILITIES, DECEMBER 31, 1950

Assets		***Liabilities***	
Cash	$ 142,111	Accounts Payable	$ 123,112
U. S. Government Securities	182,275	Taxes withheld and accrued expenses	64,625
Accounts Receivable	346,999	Deferred income—unfulfilled membership and service contracts	615,000
Inventories	430,286	Contributions held for special programs	59,074
Deferred Charges	71,959		$ 861,811
Equipment and leasehold improvements	305,790	Net Assets employed for the benefit of members	617,609
	$1,479,420		$1,479,420

NATIONAL SAFETY COUNCIL, 425 N. MICHIGAN AVENUE, CHICAGO, ILLINOIS

NATIONAL SAFETY COUNCIL

Six Steps Ahead

—*From page 19*

in Action," formulated and made official by our Board of Directors, on which each Conference has three members of its own choice.

This doctrine must have been really revolutionary. It's quite clear some Conference members haven't believed what they heard or they haven't understood what is meant by cooperation.

It would seem simple enough that if our staff members cooperate with other members of the Conference that other members should cooperate with them. And equally important, should cooperate with each other. Has this happened? Not nearly to the extent desirable or possible.

Has each member brought his projected plans or those of his organization to the discussion group, the Conference? Those who have are the exceptions and they have been so conspicuous as to be unique. Most of them have kept right on peddling their own papers on their own routes.

No person has a corner on good ideas, and I've never heard a proposed program that couldn't be improved by free and understanding discussion. Besides, the agency would leave the Conference meeting with the blessing and good will of all the other agencies represented.

Step 4—Belief in Each Other

The next and urgent need is to strengthen our faith in each other. One of the basic tenets of democracy is that each of us has in him more good than bad. I believe that, implicitly. Let's look for the good in our fellow Conference members.

We could make a good start in Council action and nationally if we worked harder. In industry let's stir top management to an active interest in safety—in the factory or business and outside of it. There is clear cut evidence that this is necessary. When achieved it is effective. To cite a single example among many: This summer I presented a Distinguished Service to Safety Award to a certain railroad. Its improved accident record began about five years ago with the advent of a new president and a new board chairman.

Let's encourage management and labor more than we do to work together in accident prevention. There is no moral justification for either side carrying over into safety the differences and distrust that too often have been engendered by questions of collective bargaining methods, wages, hours, pensions, and other working conditions. In safety, management and labor surely have common interests. The Council's policy on this matter is crystal clear, and I have heard no dissent to it. We ourselves in the Council ranks might provide a good example.

Let's sell safety to our schools and colleges. This is a field where we are extremely vulnerable. To most school people we are still an "outside" agency. They still consider us in the same category as commercial agencies. But a

How KOPPERS COMPANY USES Scott Air-Pak (TRADEMARK) to PROTECT WORKERS *In Toxic Areas*

*Picture shows wearer with Scott Sling-Pak loosely carried — can be firmly attached in seconds when in action.

INTERESTED primarily in workers' safety — and not averse to maintaining continuous production as well — the Koppers Company, Inc., equips maintenance personnel with Scott *Air-Pak* Safety Breathing Equipment, for safe, quick repair work in toxic areas. Pictures above and below, taken at the Kobuta, Pa. plant of Koppers Chemical Division, present a typical example of how this is done.*

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good school program across the nation would be the greatest single force in the safety movement. And a single school generation would prove it.

In traffic safety, let's do two things. First, let's quit mollycoddling the incompetent or apathetic public official. And (2) let's build public support groups in every village, city, county, and state in our land. They should be comprised of our most influential men and women. They will give support to conscientious and able public officers.

In this connection, let's quit being diplomatic with a certain section of the public. I refer to the crazy traffic fools who drive and walk on our streets and highways. This group, I'm convinced, is a minority. But it is a menace to all decent-minded and intelligently careful drivers and pedestrians. These "crazy fools" don't keep their cars in good condition. They disobey signs, signals, and regulations of the road. They speed. They zoom from one traffic lane to another, and back again. They pass cars on curves and hills where it is impossible to see what is ahead. They take chances at rail-highway crossings. They drink and drive. They drive when they are sleepy. They start late and hurry in desperation to reach their destination to save a few minutes for nothing. They are the chronic ticket fixers. They show off. They are smart-alecky. And they disregard the fundamental rules of courtesy.

These people should be made to feel the displeasure and disapproval of all the rest of us. But the rest of us must shed our cloak of apathy and show more civic courage.

Let's take a good look at ourselves. It's not very important who originated the slogan "Be careful—the life you save may be your own." Here is a supplementary slogan for traffic safety: "Watch out for the crazy traffic fool—the life he takes may be your own!" You are welcome to claim it as yours, just so it helps to prevent accidents.

It's not overly important who made the best speech, who wrote the best feature article, the best

editorial, or the best news story, or who drew the best cartoon. Everybody's talent is what counts. There is enough talent in our membership to work wonders if only we willed it so.

And finally, in this fourth step, the attention of the professional safety leaders is earnestly sought. We warn them that any group in any area of human activity faces the danger of a very real infirmity. It may be called hyper-institutionalism. This is a big word for a common weakness among human beings. It means that a group lives with an occupation so long and so closely that it feels a prior claim to the field and a lessening compulsion to explain its program and purposes to those whom the group is designed to serve.

Just look in any direction and note the "closed corporations," the "select clubs," the "professional sanctity," and the "smugness of group self-satisfaction." The antidote is humility, faith in others, new blood, and a determination to serve humanity.

We may not like the way your hair is parted. We may wish you wore less noisy socks or neckties. We may disapprove of your language or your stories. But we would be disloyal to the safety movement if we permitted such prejudices to undermine our faith in you. Faith will lead to cooperation. Faith will, it is said on respectable authority (!), remove mountains. We haven't any mountains to remove. We merely have to make our Conferences work. We are simply trying to cooperate. Let's try harder, beginning today.

There is a certain major league baseball team with more .300 hitters on it than any other team in the league. It didn't win the pennant. The reason most frequently given was "too many stars who didn't play well together as a team." We are engaged in an enterprise where not a pennant, but human lives, human suffering, economic health, and national security are at stake. Let's build team work through cooperation, through faith in each other. We can do no less, and remain true to our trust.

—*To page 138*

The commonsense way to
CLEAR AND PREVENT ATHLETE'S FOOT
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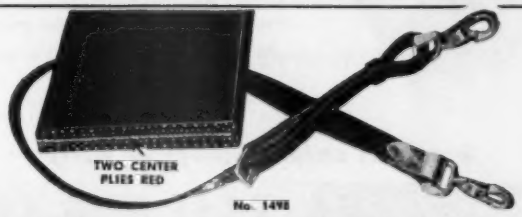

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R. H. BUHRKE CO., 4701 W. Grand Avenue, Chicago 39, Illinois

Six Steps Ahead

—From page 137

Step 5—Support for One Another—Financial and Moral

This deals with the "sordid" question of financial support. The National Safety Council at the moment depends on corporation support to a very high degree. But that needs an explanatory note. Contributions from corporations account for only one-sixth of our annual income and one-third of that comes indirectly through foundations. The rest of our income is from dues and sale of materials, bought and delivered as any other service useful to business and industry. Why the resistance to our appeal for corporate giving? Well, it's a new movement and there are many demands upon corporations. The state and local safety councils will tell the same story. But let's all increase and improve our requests.

In 1942 and 1943 the War Production Fund to Conserve Manpower was actually opposed by some industrial safety supervisors on the ground that it would result in smaller budgets for their own business and industrial safety departments. Of course the exact opposite happened. When top executives became aware of the safety problem, they gave more attention and financial support to their own safety programs.

Business executives properly insist that the base of support for accident prevention must be broadened. It's being done, but it is a slow job. How many of *you* have dipped into your pocketbooks to make a personal donation to your local or state safety council? I won't *ask* how many of you have done that for your National Safety Council; I'll *tell* you. We have exactly 583 individual memberships—and their dues are payments for service—not contributions. Our individual contributors should be numbered in the thousands, and those of state and local councils in the millions. Other causes, no more worthy, have such support. Our cause can too.

Funds are necessary to organized effort. Organization is necessary on a modest scale, at least, to secure cooperation on a national, state or local level. Let's get adequate financial support and at the same time get other agencies to spend their own funds on their parts of the total accident prevention program. The two goals are thoroughly consistent with each other. Cooperation is a two-way street.

Step 6—Constant Determination and Hard Work Toward Full Cooperation

So now we have the cooperative groups. They have accepted cooperation as the ideal method in accident prevention. Distrust is replaced by whole-hearted, unified action. They have faith in each other because they have faith in a job worth doing. They have adequate financial and moral support.

The five previous steps will be of little avail unless this last one is taken. It is a constant rededication, a renewed consecration to the reduction of human suffering first of all, and, next, renewed con-

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secration to the reduction of economic and national losses.

No one can view with equanimity the broken, bleeding and lifeless victim of an accident. I employ a yard man at home. He lost both feet and a finger in a steel mill accident. He still works in the steel mill and he does the work of two ordinary laborers in our yard. He is cheerful and willing and takes great pride in his workmanship. The latter point is priceless to our economy and to progress. What would that man have accomplished had he retained all his physical powers!

I know a young woman who was facially disfigured for life in a home accident. She is embittered, unhappy, and a psychopathic case. Her life is, in any comparative sense, almost useless.

Recently in New York a mother telephoned me. She said she fully agreed with what I say about accident prevention, but that I had omitted one point. She said that her son had been killed in a traffic accident and that she was "killed" too. She meant, of course, that her zest for life went with her beloved son.

Because of countless incidents like these, we must never lose sight of our purposes. They are high and noble purposes, and they deserve our everlasting best. No littleness of any kind must alter our determination to win the big struggle against accidents.

There is a quotation from Booker T. Washington that I like: "I will allow no man to drag me down so low as to make me hate him."

Here is another way to say it: "I shall ever strive to rise to that plane where love for my fellow man governs my every thought and act." With such ideals, we should one day know the glories of cooperation. Then thine and mine shall be an eternal reward—the divine blessing. "Well done, thou good and faithful servant. . ."

Postscript

There was one paragraph in my report a year ago which is so basic to safety work that it bears constant recollection!

"Our concept of an individual human being is an interesting composite. He has sense percep-

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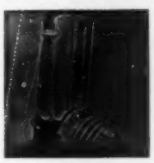

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tions, related to each other, and to things about him. He is a knowing creature and so indulges in abstract and creative thought. He has a will and so exercises considerable control, especially over the inanimate aspects of his environment. He is a rationalist, and so he is importantly influenced by invention and discovery. He takes progress for granted. He has a soul and so is guided by a deep and strong faith in a metaphysical life. He is not a superman, is not a super leader, and does not believe in a super state. His powers to think rationally, to create, and to control do not take an assertive, aggressive form. He is moral, beneficent, tolerant, independent, free, peaceful, and industrious. The American ideal, in short, is the good man."

You and your loved ones, your friends and neighbors, your fellow countrymen, your fellow men, so defined are eminently worth saving. Each one should be protected against accidents, disease, disaster, and any other misfortune that endangers or impairs his maximum effectiveness as a responsible member of society. Our strength as a nation and our usefulness among the peoples of the world are directly proportionate to the strength and usefulness of each of us as individuals.

I want at this point to stress with all the emphasis at my command the principal general method by which work in safety can be made most effective. I refer, as I have repeatedly for nearly a decade, to the principle of cooperation.

Webster says that "cooperate" means "to act or operate jointly with another or others; to concur in action, effort or effect." It would seem that the idea of working together is so simple as to be universally acceptable. On the contrary, the application of this simple principle is complex and difficult.

Primitive tribes exemplify cooperation within rather severe limits. Their individual members cooperated among themselves for day-by-day living, for protection against hostile tribes, and for making war against other tribes. Sometimes two or more tribes co-

operated for the second and third reasons.

As population increased and, in consequence, tribes grew in size, for example, into city-states in Ancient Greece and Egypt—cooperation continued with notable variations. Captives from conquered tribes or states cooperated with their captors, but from fear and necessity rather than from any sense of loyalty to their new governing groups. Variations of this character are traceable in history to the modern nations.

Expediency in economic affairs leads to cooperation on a limited scale, but throughout human record, cooperation gave way to violence when economic greed and selfish ambition for power impelled states or nations to foresake the paths of peaceful cooperation.

Political alliances and trade agreements of our day are a form of cooperation which in highest terms are maintained for the best interests of humanity; in lesser terms, for mutual benefits to groups of states or nations; in realistic terms, sometimes regrettable, for protection against opposing states or nations; and in basest terms, for unjustifiable and ruthless aggression.

Nature produces examples of limited cooperation. Ants work together, and bees, for example, but the social organization of each is hardly a model for human beings, even though both may be credited with what is for them good results. An ant or a bee falls considerably short of our description of an individual human being.

Family life, as we know it, is a better example of cooperation. Devotion to an ill or crippled member of the family, sacrifice for the future welfare of our children, labor to provide food, clothing and shelter for our beloved, and efforts to protect the family name are typical of family cooperation. This is based on the keenest form of group loyalty. The elders and the youth of a family plan and work together for the welfare of each not only because of blood ties, but because each member is important as an individual and consequently as one of the family group.

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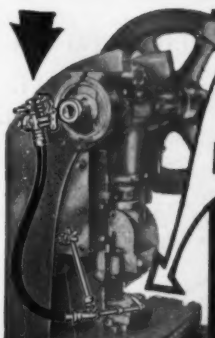

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community, state, and national action. In religious, political, and economic areas. And, in nationality background, racial and other cultural interests. So in many areas of American life, we have social cohesion or cooperation as an actuality.

It seems quite consistent in a free society to find cooperation in some aspects of group life and competition in others. They are both traceable to the original nature of man but for good or evil they depend on man's reasoning. His instincts to live—for food, clothing, shelter, other possessions, protection against foes of any kind—are good only so far as motives and methods are good. Instincts and impulses which lead to aggression and combativeness are good so long as they do not harm others. It is obvious that man by nature finds cooperation and competition consistent in group life if defensible values are sought in a logical way.

Cooperation in accident prevention is organized effort on a grand scale for protection against death, injury, economic loss, and national weakness. We have seen the results of competition among agencies, where each was clamoring for public credit, where each representative was ruthlessly striving for the center of the stage and the spotlight. It wasn't a pretty picture. Only a sadist or someone with a sardonic sense of humor could be amused by the continuous destruction of life and property which competition in safety failed to reduce.

We have also seen enough examples of cooperation to know that results are extremely gratifying. And when cooperation is at its best, we know that accidents are markedly reduced.

There is, indeed, some room for competition in safety. Motives and methods can never differ, however, from our central purposes. We might compete ethically, of course, for competent personnel. We might compete for ingenuity, excellency, and efficacy of action programs. For efficient and effective discharge of our assignments in the fields of accident prevention. For superior achievement within comparable groups. And

especially, we might compete with our own records to the end that the accident curve ever tended downward and sharply so.

These illustrations merely indicate some healthy forms of competition. Reason guiding our natural instincts and impulses makes cooperation the overwhelming favorite as the governing principle of action in safety work. "In union there is strength." "We must hang together or we shall surely hang separately," "United we stand; divided we fall." These quotations seem happily pertinent to our own efforts in accident prevention.

This principle of cooperation was made official National Safety Council policy on October 19, 1948 when the Board of Directors formally approved "Safety in Action," in which are embodied these words:

We are a council in the true sense of the word—a cooperative association of groups and individuals working together for the conduct of safety activities, both separately and jointly.

An Extra Janitor

—From page 37

will grade one-half the plant while teams "D" and "C" grade the other half. This is done so that we will have more than one grade for every department. When these grades are averaged, it makes for more adequate grading. At one time we had each team grading the entire plant, but we found that the time required for this was more than the graders could ordinarily spend.

At any time during the grading period team "A" will take the housekeeping inspection form and proceed into the plant for inspection purposes. Let us suppose they decide to grade the tool room first; after contacting one of the members of supervision in the tool room to get him to accompany them, they make a complete inspection throughout the department. They use our housekeeping inspection sheet and list the conditions which they find that are below par. This form has a place at the top for the date inspected, the name of the supervisor and

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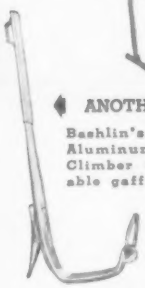

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department to be graded and the period over which the grading covers. The second line provides space for the names of the two inspectors.

In the body of the sheet we have five categories where out-of-line conditions are listed. The first is Equipment and Tools. This item covers all machinery, trucks stock boxes, tools, conveyors, ovens, racks, brooms, and other equipment used in the department. The inspectors might list here such items as No. 1 planer needs cleaning—equipment in need of paint, stock box broken, should be repaired, fixture on floor beneath conveyor.

In the second category we have Parts and Material. This item covers all conditions relating to the product of the department. We list here any skids of material or trucks found in aisle, improper piling of material, or obsolete material that should be discarded.

The next category is Foreign Material and Floors. This item covers all foreign material in the department as well as condition of floors, windows, stairs, and other items directly related to production. We would list here such conditions as pop bottles on the window sill, dirty gloves in corner, excessive scrap, paper or cigarette butts on the floor.

Next is General Appearance and Condition. This item covers all conditions not included above. Especially those items difficult to classify. Here we might list disorderly cupboard or inadequate cupboard space for mops, mop buckets, shovels, brooms, and other similar equipment.

The last category is Safety, conditions as regards safety and fire. The inspectors list any unsafe acts or unsafe conditions which they note during their inspection.

Under Remarks at the bottom of the page we very often commend the department for improvement or some condition that is particularly good. This inspection sheet is typed and sent to the department supervision immediately following the inspection. At one time grades were placed in the column on the right of the sheet, but we now leave the grade off, the thought being that we will get a truer grade if the grader knows that the supervision of the department in question learns of the average grade only and not the exact grade given by each team.

Perhaps on the following day or maybe a week or a month or two months later, team "B" will grade the tool room in much the same manner as team "A" and the average of the grades of teams "A" and "B" will be the grade for that department. Some departments which have operations throughout the plant will have grades from all four teams to be averaged for their period grade.

In grading all departments we try to be uniform by saying that an average department, considering the work to be done, would receive a grade of 85. We do not expect our mill and compounding department to be as clean as the tool room. They should be as orderly, but would not be as free from dust. We have to consider the type job that is being done with what the department has to do with.

To overcome the objection with regard to the maintenance department competing with the cafeteria, we have divided the departments into two groups, one group being principally the departments that belong to the manufacturing division, including maintenance and tool room departments, the other the indirect departments, such as tool stores, stock, warehouse, inspection, shipping and cafeteria. The medical department and offices are not graded. This means that we have two winners in each period.

The awards given to the winners are one of the most important parts of any housekeeping program. In this I believe we have hit upon an idea that is tops. We give each employee of the winning departments two theatre tickets that are good at any of the three RKO Theatres in downtown Dayton. The tickets are issued on the first of the month and are good for a one-month period so that the employee has a very good choice of shows which he may attend. On one occasion we issued the tickets on the first of

the month and about the second week along came an extra fare picture, "Joan of Arc," with a price of $1.25 instead of the usual $.70. This hit our budget rather hard, but we paid the bill and I think our program is better because of this incident.

The theatre tickets are not considered cheap by the employees and they work hard for them in many of the departments. This is especially true in any department that has been a winner. The employees keep their department clean over a three-month period and find that it is not difficult and that it also makes for more enjoyable working conditions. In succeeding periods, they continually inquire as to their chance of winning these theatre tickets.

Since supervision must be the guiding force behind any program, we decided that there should be an additional award for the foremen of the winning departments. For this we have a banquet at the best hotel in Dayton. We invite the division heads, all the graders and all of the foremen of the winning departments.

You are probably wondering how much a program of this kind costs. In 1949 we spent $1,425. This is about half what one extra janitor for the entire plant would cost and I think you will agree that a program of this type, where we have nearly everyone interested in housekeeping, would do a great deal more good than would an extra half janitor.

Better than that, since the beginning of the program, we have not had a disabling injury that could be attributed to poor housekeeping.

Paper Machines

—*From page 33*

on the machine; therefore prevention of injury depends on a safe technique.

14. When the felt is to be washed it should be roped up on the top side of the outrunning nip of the press rolls. Felts should be turned at the outrunning nip of the press rolls, not at the inrun-

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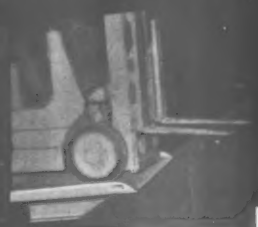

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ning nip of the press roll or the tail roll.

15. When felts are changed, the doctor blade should be kept in wiping position. This prevents the cuts which would occur if the doctor were off the roll. A doctor should be lowered to the roll only when fingers and hands are in the clear.

16. If stock is to be cleaned from the rolls the employees should never put their hands between stretch rolls and felts while the machine is in motion.

17. Employees should be warned to watch their step on the floor of the felt pit. This surface is generally slimy and very slippery. Slime should be removed. (See paragraph 8.)

18. Where two felts are used, the first should be washed and turned and then stopped before the second is washed and turned. This will prevent water and stock from splashing into the eyes of the felt washers.

19. Only non-flammable fluids are safe for cleaning grease spots from felts or pitch from rollers. The use of gasoline is not recommended. The practice of soaking felts with water before using gasoline does not eliminate the danger that gasoline vapor may ignite.

20. Several companies report using alkyl-aryl-sulfonate solvent. Soap is rubbed into the grease spot as the solvent is applied and the spot disappears. This solvent is non-toxic and non-flammable.

21. Carbon tetrachloride is sometimes used as a spot cleaner. Although it is an effective solvent and non-flammable, carbon-tet is extremely poisonous. Its use is not recommended; but if used, its vapors must not be allowed to accumulate.

22. Steam hoses should be kept in good order. Connections should be secure and checked regularly. Condensed water should be expelled from the hose before full pressure is applied.

Other Wet-End Precautions

23. The footboard over the wire should not be used for any pur-

pose except to inspect or repair the wire, or the dandy roll. Many companies have a permanent walkway with guardrails installed over the wet end.

24. Broke carts to catch the wet broke from the doctors should be correctly balanced and in good condition. Rubber-tired wheels attached to the bottom, rather than to the side of the box, make a broke cart easier to wheel. A device such as a spring return or a hook should be provided to keep cart handles off the floor where persons may trip over them.

25. Wire should be handled gently during inspection and changing operation. Too rough handling can cause severe cuts. Improper lifting and handling of wire rolls during wire changes may cause back strain. Employees should be taught correct lifting methods. Workers should understand the danger of working on slippery floors or from insecure footing.

26. Frequently machine tenders sustain injuries because they reach into the machine to scrape crumbs from the felt-carrying rolls. A doctor installed horizontally across the entire width of the felt carrying roll will keep the roll free from crumbs. Similar doctors, or scrapers, may be installed on press rolls, for the same purpose. Doctors are not only safer than hand scraping but keep the rolls in better condition.

27. Doctor blades are a source of injury, and machine help must exercise caution to avoid touching exposed blades while cleaning them. Bare hands or wads of paper should not be used to clean press doctor blades. Blade wipers made of pieces of dryer felt, or calender scrapers, may be used. These cleaning instructions apply to all doctor blades.

28. A team of two men may be assigned to clean doctors; one to block up the doctor in lifted position while the other scrapes the blade. The blade should be held high enough to allow plenty of room for the cleaning tool. The man who holds the scraper should keep his hands out from under the blade at all times.

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Dryers

29. The first dryer should have at least a permanent railing or an apron guard in front of it.

30. Dryer sections on modern machines (Figure 3) are generally equipped by the manufacturer with rope drives to carry the paper through the dryers. Rope carriers should be installed on dryers not so equipped, whether the machines are new or old. Whether or not a rope drive is used, the nips of smoothing presses should be guarded.

31. If it is necessary to pass paper through the dryers by hand, only skilled employees should be assigned to the job. When they reach for the paper coming out of the top dryer, they should not grab the paper and not reach too far over or onto the bottom dryer. Grabbing can cause the paper to break so that the operator will have to overreach to catch it again. He may then lose his balance and slip.

32. If travel of the paper permits, the operator should take the paper from the top dryer with his right hand (reverse for a left-hand machine) with the palm of the hand facing him, and left foot solidly planted on the running board. It is essential in feeding paper to either the top or bottom dryer, that the hand motion always be toward the front journal and not the rear one. It is suggested that a man, taking tail over the top of stack dryers, wear gloves to keep from being burned.

33. The paper must be placed properly in the nips between the surface of the dryer and the dryer felt. The operator's job is to guide the paper from the top to the bottom dryer, then pick it up when it comes out of the bottom dryer and place it in the top dryer. He must not put his fingers or hand too far into the nip, and should see that the paper does not get twisted around his wrist and thus cause him to lose his balance. In order to prevent an operator from being drawn into the downward running nip between roll and felt, a pipe guard conforming to the contour of the roll should be securely fastened to the frame as close as possible to the end of the dryer roll.

34. On machines using rope carriers, if the ropes should break or come off the pulleys, employees should not be allowed to pass paper by hand. When ropes break, the machine should be shut down until the repair is made. The ropes should be put back into operation immediately.

35. When seams are to be sewed in dryer felts or the felts are to be repaired, a platform should be provided to support the repairman. He should not be permitted to stand on dryer rolls.

36. Felt rolls on dryers should be at least 8 inches from the dryer rolls. This height may be impractical for older machines, but it should be considered essential for new equipment.

37. Dryer and scraper spear poles should be made of a material

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that does not splinter. Otherwise, when these poles become scuffed from rubbing against the machine frame, they will present sliver hazards. Poles made of hardwood, bamboo, or basswood are used. Wood with longer fibres, like fir, splinters easily and is not desirable.

38. Some companies report the successful use of aluminum or magnesium alloy poles. Others state that a metal pole would not break if it became caught in the dryers and would therefore damage the felts. However, no report that this has happened has been received.

39. Dryer scraper shafts should be marked, preferably by a small flange near the outside end, to indicate when the scraper has reached the back end of the dryer.

40. A suggestion is made by one mill that dryers and felts be cleaned by a controlled pressure, air stream from a hose with a 5-foot nozzle. Vacuum cleaners have been used in this operation with excellent results.

41. Employees should be alert to prevent burns when they clean the dryers during a break or when passing paper by hand.

42. Driving gears at the back of machines should be completely guarded. If gear bearings must be oiled while a machine is in operation, a lubrication piping system should be installed.

43. Steam pipes leading to dryer cylinders should be insulated where there is a possibility that operators may come in contact with them. The usual practice is to insulate both steam and hot water pipes for a height of 7 feet above floors or platforms.

Calenders

44. Because of the nip hazard, calender stacks (Figure 4) are considered by many to be the most dangerous unit in the paper mill. However, efficient doctors, and the use of devices such as compressed air nozzles, feeder belts or ropes, and guides to lead paper over the top roll into the first nip have greatly reduced employee injuries.

45. Stacking paper by hand is still widely done and calls for extreme caution. Several useful tools are available for this operation.

46. Before stacking paper, the operator should make sure that everything is in order. He should remove all felt or pads from the calender doctors, and see that they are securely locked and the air blowers are shut off, so that the paper will not be blown away from the nip.

47. The man who stacks the paper should stand on the steps of the calender stack, never on the doctor, with one foot on the outside step, one foot on the inside step, and one hand securely gripping the hand or guard rail. He should stand at such a level that the nips will be chest high. This will prevent dangerous overreaching or underreaching.

48. A stacking tool should be used, but if threading is done directly by hand, an important precaution must be taken. The worker should grasp the paper with a doubled fist, leaving about 12 inches of paper projecting. The motion of the hand should be toward the near journal rather than directly into the nip.

49. If paper sticks to a roll and starts to go up instead of down, the stack should be stopped and a new start made. Workers should not try to grab the paper to correct the trouble.

50. Hand bars and steps with non-slip surfaces should be provided at each calender stack. Stack footboards and ladders should also be equipped with non-slip surfaces.

51. Small steps on calender frames offer some hazard (Figure 5). Steps should be wide enough (9 inches square with the edges and corners rounded) to provide ample footing. Although it was believed at first that these larger steps would present an obstruction it was found that this was not true. Larger steps appear to give the worker increased confidence when climbing.

52. When it is necessary to omit

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some nips in a stack, a block at least 4 inches thick may be placed between the bearing housing of the used nip and the bearing housing of the unused nip. This separates the rolls enough so that the operator cannot be drawn in.

Calender Weights

53. When the sheet breaks, the calender weights should be removed before the paper is started through the stack again. If a wad goes through the rolls at the moment a worker is removing the weights they may fly up and strike him.

54. When stack bars or weights are being removed, they should be held securely.

55. Old rags or waste should never be used to wipe the calender rolls or doctor blades while the rolls are in motion. To remove scabs, blisters, or other foreign material from the rolls, only special scrapers which will prevent the operator's hands from being caught in the nip should be used.

56. When removing calender scabs from a pair of rolls which forms a nip, pressure should be applied below the center of the bottom roll and against the direction of rotation or above center of the top roll and against rotation.

57. Improperly used hand spears can be a source of puncture wounds. The handle of the spear should not be used to push a wad of paper through the stack. If the handle should become caught in the nip, in an effort to dislodge it a worker could easily be stabbed.

58. In some mills, a special cutter is attached to the frame of the dryer for cutting "tails." This cutter, it is claimed, reduces the hazard to the operator and makes the use of a jackknife or spear unnecessary.*

59. To guard against shock from static electricity, calender stacks should be grounded.

Reels

60. All reels are hazardous, and employees must be impressed with the need for great caution while working around them. Spare reels should be placed at least 15 inches from the winder drum.

61. Broke should be removed from the floor between the reels before the paper is changed from one reel to another. The hazards on stack reels increase when both reels are nearly full of paper. A nip is then formed between the top and bottom reels.

62. If an operator "feels his reel," that is, runs his hand over the full width of the reel, he may put his hand too far in between the top and bottom reels. Bad burns can result and his hand can even be drawn through the reels.

63. When both paper rolls are wound to a large diameter with little space between them, the operator may be caught on the nip side and drawn between the rolls. If rolls must be run to a large diameter, a space of at least 8 inches should be left between them. It is a good rule not to enter the reel stack at all when both reels are nearly full.

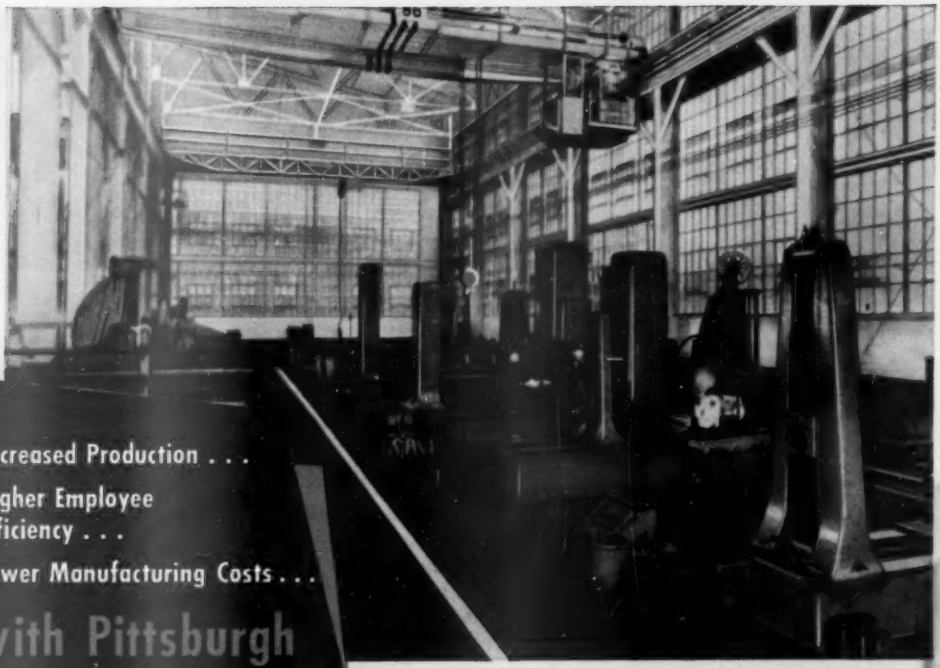
64. The operation of stack reels may be made safer by changing the direction of rotation of one reel, thus eliminating the nip. To do this the belts of one reel may be crossed, or (where reels are gear driven) an idler gear may be installed.

65. The revolving type of reel does not present a nip hazard since one reel is on the side toward the calender and the other on the side toward the winder. However, an operator sometimes goes between the winding reel and the stationary part of the machine to smooth out the paper. This practice should be prohibited. The worker may be caught on the revolving rolls.

66. In some mills reelboards are used to iron out wrinkles as the paper is being wound. Reel boards should be made of hardwood 2 inches thick. If an iron rod extends across the top of the stack reels, the board should be fitted with a hook 4 inches wide which fits snugly over the rod.

—To page 156

* See Engineering Study, *Pulp and Paper No. 1*, National Safety Council.



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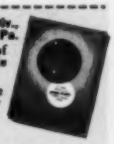

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SAFETY POSTERS

IMPORTANT

ALL miniatures shown on these pages are of NEW posters — produced for the first time this month. Excepting the Jumbo poster (below, left) all will be available during the remainder of 1951. Those displayed on the following pages in black and white are actually printed in two or more colors. We suggest you refer to this copy of the News in making monthly selections.

In addition to these new posters, you will find a great variety of subjects among the 744 posters illustrated in the 1951 Directory of Occupational Posters, and which will also be in stock throughout 1951. For a proven plan of selecting your posters objectively, refer to pages 4 and 5 in the Directory—a copy of which has been sent to all National Safety Council members. Additional copies are available at 50 cents each—write Membership Dept., N.S.C.

9452-C **25x38**

Above new "C" poster, issued monthly, is indicative of the other two color posters —shown in black and white on the following pages and in the 1951 Poster Directory.

JUMBO POSTER for DECEMBER, 1951

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

9436-A **8½x11½**

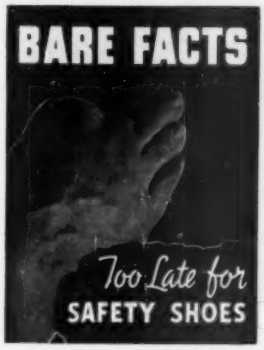
This new four color poster is illustrative of the 72 four color posters shown in the 1951 Poster Directory.

Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors
(Available only in sizes indicated)

NATIONAL SAFETY COUNCIL

9343-B **17x23**



NATIONAL SAFETY COUNCIL

9304-A **8½x11½**

NATIONAL SAFETY COUNCIL

9408-B **17x23**

NATIONAL SAFETY COUNCIL

9371-A **8½x11½**

NATIONAL SAFETY COUNCIL

9301-A **8½x11½**

NATIONAL SAFETY COUNCIL

9395-A **8½x11½**

NATIONAL SAFETY COUNCIL

9433-A **8½x11½**

NATIONAL SAFETY COUNCIL

9355-A **8½x11½**

NATIONAL SAFETY COUNCIL

9440-A **8½x11½**

Electrotypes or payroll inserts can be furnished on all poster illustrations shown above.

Posters below are printed in two or more colors
(Available only in sizes indicated)

9405-A 8½x11½

9423-B 17x23

9422-A 8½x11½

9430-B 17x23

9426-A 8½x11½

V-9439-A 8½x11½

V-9413-B 17x23

V-9444-A 8½x11½

V-9441-B 17x23

Electrotypes or payroll inserts can be furnished on all poster illustrations shown above.

Message Book Matches

A new tool for keeping the safety program in front of the worker on and off the job, are the National Safety Council's *Safety Message Book Matches.*

There are six distinct match covers, each in full color, each dealing with a different aspect of the plant safety program. The subjects of the covers are: warning signs, protective equipment, first-aid, alertness, keeping walkways clean, and alibying accidents.

Installed in "help yourself" boxes by time clocks, rest rooms, smoking areas, and near drinking fountains, or placed in cigarette vending machines in the plant, these safety matches are effective, inexpensive safety reminders.

Member price: One case (2500 books packed in cardboard boxes of 50 books), $16.25, federal excise tax and freight included. Write for brochure and quantity prices.

News Index

The January-June 1951 index to the NATIONAL SAFETY NEWS is now available. It provides a guide to current materials, developments, and events of interest to safety engineers; if your company files or binds back copies of the NEWS, you will find this index particularly useful.

The Index is free. Write to the Library, National Safety Council.

Data Sheet

Data Sheet D-PP 13, *Wood Rooms*, deals with the hazards and recommended safe practices in the preparation and conversion of logs into chips or ground wood. The process is traced from the transfer of logs from the yard or mill pond to the barkers or the log deck and finally to the storage of chips or ground wood in bins or tanks. There are illustrations of proper personal protective equipment, good machine guards, and safe handling techniques.

According to National Safety Council statistics, wood room operations are among the most dangerous in the manufacture of pulp and paper. This data sheet, therefore, should be of considerable interest to this industry.

Member price: 1 to 9 copies, 17 cents. Quantity discount.

Paper Products Sell Safety

An article by Harold R. Alley, Staff Representative for the Pulp and Paper Industry, entitled, *Paper Products Can Be Used to Promote Safety (American Paper Converter*, September, 1951) is now available as Safety Reprint, Pulp and Paper, No. 2.

Mr. Alley points out that "paper converters have an opportunity to make an important contribution to a worth-while cause, and to produce a profitable item while doing so, by offering a line of paper products with a message about safety." He discusses the possible markets for such products and the experience of converters who have already used safety messages on their products.

Member price: 1 to 9 copies, 17 cents. Quantity discount.

Three New Saf-T-Aids

Saf-T-Aid No. 2, *Fuse Demonstration Board*, illustrates and gives the building plans for a device that demonstrates the fire hazard resulting from over-fusing and overloading circuits. Any competent electrician can construct this device, which is designed for use in either domestic or industrial safety education programs.

Saf-T-Aid No. 3, *Machinery Control Circuit Demonstrator*, gives the plans for constructing a device to show the danger of not locking out master or main switches when making repairs on machinery. Plans for two boards are given, so that a demonstration board can be devised for varying types of electrical control equipment.

Saf-T-Aid No. 4, *Ohmer Ground Circuit Demonstrator*, gives the plans for constructing a device to show the necessity of maintaining a good ground connection on electrical equipment. This device consists of the figure of a worker. When he accidentally touches a shorted piece of machinery, which is grounded, a blinking electric light representing his heart remains lit. But when the ground is broken and he makes contact with the shorted equipment and a steel beam, the "heart light" goes out. The device is easily constructed of material found in most shops.

Single copies of *Saf-T-Aids* are free. Write to the Industrial Department of the National Safety Council.

Safety Instruction Cards

Seven new Safety Instruction Cards, pocket-sized safety reminders to employees, have been published on operations in the Pulp, Paper, and Logging industry:

665—Log Driving.
660—Unloading Logging Trucks.
658—Operating Logging Tractors.
656—Log Hauling with Trucks.
657—Logging Tractors (General Precautions).
659—Loading Logging Trucks.
661—Log Skidding with Tractors.

Seven new cards have been issued on Railroad Safety:

663—Crossing Railroad Tracks.
664—Railroad Drop Pits.
765—Railroad Pits.
766—Jacking Railroad Equipment.
767—Safety in Railroad Yards.
768—Coupling and Uncoupling Railroad Cars.
769—Operating Railroad Switches.

Card No. 666, *Fitting Foundry Leggings*, illustrates how foundry leggings should be worn for maximum protection and comfort.

Two cards have been revised: No. 237, *Fire Prevention Checklist*, which lists the important checks to make on a fire inspection; and No. 524, *Signals for Locomotive Crane Operators*, which

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illustrates standard signals for locomotive crane work.

Member price: 1 to 9 Safety Instruction Cards (same or assorted titles), 5 cents each. Write for complete list of cards and quantity prices.

French Edition of Safety Reprint

Safety Reprint No. 1, *We fix Responsibilities*, an account of how supervisors of a public utilities company analyzed the weaknesses in their safety program and cooperated with the safety department in eliminating them, has been translated into French for the benefit of French and French-Canadian personnel.

Member price: 1 to 9 copies, 17 cents. Quantity discount.

Bridge Crane Accidents

Safety Reprint General No. 22, *Ten Safeguards to Cut Bridge Crane Accidents*, has just been issued. The article, which originally appeared in *Factory Management and Maintenance* (August 1951) gives ten hazards in bridge crane operations and some devices and guards to prevent them.

Member price: 1 to 9 copies, 17 cents. Quantity discount.

Paper Machines

—From page 150

67. There should be no hook on the board for the bottom reel. This board will move backwards as the reel gets bigger. A smooth lightweight cleat nailed to the floor at the proper distance from the reel against which the reel board is rested will keep the board in place.

68. If reel boards that rest on the floor and against the lower reel have a wide base, they will be less likely to tip if an employee should bump against them.

69. Reels should never be hoisted while they are still revolving.

Winders

70. Winders should have a brake to stop the rolls from coasting when power is shut off.

71. As winders are usually operated, there is a nip between the drum and the paper roll on the side toward the operator. Several types of guards have been designed to eliminate this hazard.

72. One simple guard is a board hinged to the cross bar of the machine close to the paper roll on the inrunning side. The board is dropped out of the way when the rolls are to be removed. Another type of guard is a semi-circular metal plate which encloses the winding drum and automatically adjusts to the increasing side of the roll.

73. The safest method is to change the direction of revolution so that the drums revolve outward, thus eliminating the nip on the operating side. This change can easily be made on most machines by the installation of an idler roll behind the rear drum. The paper is then led under this roll and up over the rear drum to the winding shaft.

74. Some mill operators say that when certain kinds of paper are wound by this method, there is on the large drums insufficient contact to make a solid roll. In this case, the drums can be "ended about," or their surfaces fluted differently.

75. The operator should not start the winder until he is absolutely sure that everyone is in the clear. It is good practice for the winderman to have all members of his crew where he can see them before he starts the machine. Guards should be in place before starting. A satisfactory winder guard consists of a pipe frame gate covered with strong wire mesh. The guard should extend across the front of the winder to prevent contact with winding rolls.

76. Slitters should be stopped before the paper is threaded over the winder. The end of the paper should be folded to a point, passed over and under the rolls and then threaded over the spread bar.

77. Slitters not on the machine should be stored safely in racks.

78. Slitter knives require careful adjustment, and although some companies provide sticks for this purpose, employees often neglect to use them. The safe method is to equip slitter knives with guards

which prevent the operator's hand from coming into contact with the cutting edges. Sheet metal guards are usually provided for the knives underneath, and individual metal guards for the knives above. Knives should never be sharpened while the winder is in operation.

79. The practice of winding a cord on the core shaft to cause the paper to reel evenly is unsafe. A collar attached to the shaft by safety setscrews will serve the same purpose and present no danger to the operator. A collar which locks automatically has been devised for use on winding shafts.

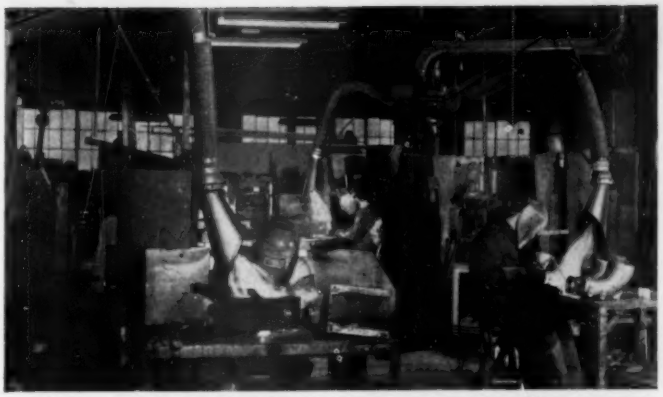
80. If two rolls wind into each other, a knife should never be used to cut them apart while the winder is in motion. This is an extremely dangerous practice. The winder should be stopped first.

81. Handling shafts and cores is a source of many injuries. Injuries can be reduced by the use of hollow or aluminum shafts and by the use of tools and methods designed to keep hands and feet in the clear.* Striker bars for core shaft nut spanners should not be of metal. Flying chips present a serious hazard. A serviceable substitute striker bar can be made of leather or rawhide discs mounted on a steel shaft.

82. Winder employees should be instructed to stay out from under suspended rolls on cranes and hoists. The use of safety stops as operating stops on hoist motor controls is bad practice. Constant wear of safety stops may reduce their reliability as a protective device.

83. When starting wrappers on rolls in winders the worker should hold the wrapper with the fingers clenched into a fist. Windermen sometimes allow the wrapper to protrude beyond the edge of the roll. A hazard is thereby created because, in paper roll storage areas, stock room employees on the roll piles may step on the overlapped wrapper and fall.

* For a complete discussion see Handling Shafts and Cores, Industrial Data Sheet D-P.P.-8, National Safety Council.



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This well ventilated welding department is typical of hundreds of similar installations. Welding operators appreciate smoke and gas-free atmosphere. Thousands in service. Many repeat orders. Collecting fumes at the source with local exhaust hoods has proven most practical in operation. It is particularly helpful in winter months when doors and windows are closed. Write for Bulletin 37-D describing all types of Ruemelin Fume Collectors.

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84. Hazards in connection with the removal of rolls of paper from the winder are discussed in the data sheet "Handling and Storage of Paper Rolls."

General Recommendations

85. Steam, water, and air hoses should be clearly marked to prevent confusing one for another. All hoses should be kept on reels when not in use.

86. Railings should be provided around broke hold openings.

87. Before attempting repairs or adjustments on a machine, the control switch should be locked in the OFF position and tagged to warn others that men are working on the machine. Before starting up, a warning bell should be sounded and a check made to be certain that all hands are in the clear. Then, as a final warning, the machine should be started by "inching it" and stopping several times before moving the switch to full running position.

88. Good housekeeping is important. Broke must be kept off the floor at all times: wrenches, collars, cores, and shafts must not remain on the floor or in aisleways where they present a stumbling hazard; hoses must be kept neatly coiled; spills of oil or kerosene should be wiped up immediately.

89. If sheets of paper are handled unsafely, men may suffer paper cuts, especially to the eyes.

90. Broke hustlers should not carry so much material that they are unable to see where they are going and avoid tripping, falling, or stepping into broke holes. Handling and carrying excessive amounts of broke is also a source of back strains.

91. For more secure footing, employees should wear shoes with slip resistant soles. Safety shoes or boots are recommended to protect the toes. Men who handle wet and slimy equipment face the danger of dropping objects on their feet. Steel-toed rubber boots are often worn while washing up machines.

92. All lighting fixtures around the paper machine should be guarded and grounded, especially at the wet end of the machine.

93. A strong solution of slime remover and soda ash may be used to remove grease and oils from concrete floors. Men who do this job should wear a rubber suit, rubber gloves, rubber boots, and cup goggles. Face shields are also a good safety device.

94. The operating side of paper machines should be equipped, where practical, with devices, interlocked with brakes, which can be reached quickly to stop the machine in an emergency.

ACKNOWLEDGMENT

The first draft of this report was compiled from the following sources by Arthur Carle, Pulp & Paper Section, Executive Committee:

1. *Accident Rates in Pulp and Paper Industry*, 1948, National Safety Council.

2. Memorandums by Arthur Carle—*Hazards About Wet End of Machine, and Safety on Fourdrinier Machine.*

3. Industrial Safety Series Pamphlet No. P. P.—1, *Paper and Pulp Mill Safety*, National Safety Council.

4. Memorandum by E. B. Lambton—*Safety Precautions on Fourdrinier Machine.*

The second draft was prepared by E. P. Marconi, former Staff Representative, Pulp and Paper Section, from comments received from a wide mailing of the first draft and from:

5. *Hazards at Wet Felt Presses*, by G. J. Adams, The Paper Industry and Paper World, page 1090, February 1942.

Green Cross News

—*From page 53*

the Greater Cleveland Safety Council served as master of ceremonies and contributed a lot of sparkling fun to the evening's festivities. A highlight was a stirring address by Vice-President Snodgrass who described a recent trip to Jugoslavia where he learned the drab facts of life behind the Iron Curtain. He reported great poverty and hardship throughout the country and said that most of the people are Communists in name only. He hinted that the time may come when Tito's people will rise up and throw off the Russian yoke.

Widely heralded Delaware chickens (feathered variety) were served at the banquet as a delectable entree. The birds were provided by Jim Ashton of the Delaware Safety Council following an

alleged mysterious raid on several Class A chicken coops located on the right side of the tracks somewhere between Wilmington and Bethany Beach. A telegram from Governor Carvel of Delaware praised the managers for their important part in the national safety efforts and substantiated what the guests discovered later, that Delaware chickens certainly belong to the "aristocracy of viands."

Calendar Contest Winners For September

First prize in the National Safety Council's Safety Calendar Contest goes this month to Mrs. Alice C. Wiles of West Glacier, Mont. The theme of this contest was obey signs of life. Mrs. Wiles' limerick was adjudged best of those submitted:

Don't marry him, Sis! He won't rate!
It is safest for girl, boy and crate.

Second prize went to Dr. J. R. Doris of St. Paul, Minn., for this limerick:

For mishaps won't miss saps that won't wait.

Third prize was awarded to Louis J. Bowler of Alameda, Calif., for the following:

Thirty $5 awards were issued to:

Lawrence Reinhard, Alpha Portland Cement Co., LaSalle, Ill.
G. E. Gambler, PB & NE RR Co., Bethlehem, Pa.
Mrs. Ova Cawthon, So. Charleston, W. Va.
Mrs. C. P. Neis, teacher, Coffeyville, Kan.
Mrs. Roy Carrell, Mid-States Steel & Wire Co., Crawfordsville, Ind.
M. Belle Hanton, Holtzman, Wise, Shepard & Kelly, New York, N. Y.
Mrs. Mary Stark, Birmingham, Ala.
Mrs. H. L. Hickman, Laddonia, Mo.
Dr. Ralph S. Newcomb, Oklahoma City, Okla.
John Rankin, Tennessee Copper Co., Copperhill, Tenn.
Harry W. Conkling, Bradford, Mass.
Joe W. Weber, DeLand, Fla.
Mrs. James W. Faris, Jefferson City, Mo.
Mrs. Barbara Constant, El Paso, Tex.
Mrs. Imogene Fey, New York, N. Y.
Jefferson D. Bates, Alexandria, Va.
William J. Burke, Seattle, Wash.
Mrs. Max Levin, Milwaukee, Wis.
Marion Lewis Novisky, Rome, N. Y.
Mildred Brandenberger, Evansville, Ind.
Jesse H. Long, Tennessee Valley Authority, Chattanooga, Tenn.
Harold V. Peterson, Omaha, Neb.
Dorothy H. Mawson, Wyncote, Pa.
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Jean Ann Semling, Portland, Ore.
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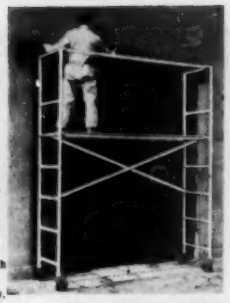
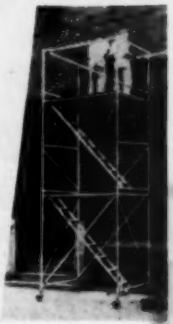


LADDER SCAFFOLDS available in 6', 8' or 10' spans. Will clear obstructions 5'10" high by 8', 7' or 9', respectively.



Definitely superior in design, workmanship, durability, strength and easy assembly, these aluminum scaffolds excel for safety, convenience and economy. *Approved by Underwriters' Laboratories, Inc.*

Scaffolds go up faster because of pre-fabricated design and snap-on braces.

Single-action brake positively locks caster wheels and swivel.

Legs may be adjusted without danger of tipping or upsetting.

Sockets have enough clearance for ease of assembly, yet provide a rigid scaffold.

Ideal for painting, maintenance and many other types of work. Get the facts! Write for FREE Bulletins PSS-20 and PSS-22. See how these scaffolds can help you.

Cole Metal LADDER SCAFFOLDING

for Greater Safety...Efficiency...Economy

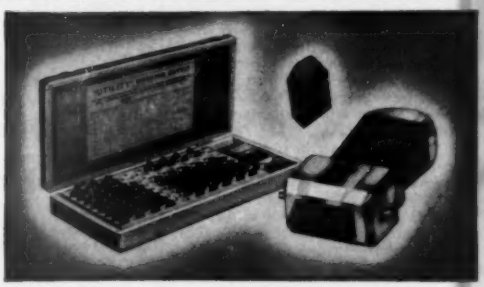
THE PATENT SCAFFOLDING CO., Inc.

38-21 12th Street, Dept. NSN • Long Island City, N. Y.

See Your Classified Telephone Directory for Nearest Office

Ladders and Scaffolds for Any Purpose — Any Place — Any Time

THE NEW SAFETY



"UTILITY" MARKING OUTFIT

Designed for light stamping work, the "Utility" outfit is ideal for marking etched plates, tags, keys, stock checks; brand names or stock numbers on steel bars; special coding, serial numbering, identification, inspection and other marking where two or more characters are required.

Send for Literature and Prices

Holder Holds Nine Sizes of Type From 1/32" to 1/4"

M. E. CUNNINGHAM CO.
SAFETY STEEL STAMPS

200 E. CARSON STREET PITTSBURGH, PA.

NEW *Sani-Dri* Brings You Basic Improvements Never Before Possible!

Amazingly fast drying time — plus the advantage of cleaner, more sanitary washrooms — make the New Sani-Dri popular wherever it is installed.

Now you can be sure of providing fast, efficient hand drying service . . . and save continuing towel expense. Saves washroom maintenance costs too! No empty towel cabinets to fill. No unsanitary waste containers to empty or become a fire hazard.

The new Sani-Dri is available in two models — No. 8-SWA Hand dryer for washrooms; and No. 8-SWH Hair Dryer for Shower rooms, pools, etc. Both models are easily mounted to the wall and carry the Underwriter's Seal of Approval. Investigate this new faster-drying Sani-Dri today!

ONLY SANI-DRI ELECTRIC DRYERS GIVE YOU ALL THESE FEATURES

- New, improved heating element.
- Larger motor and blower than any other dryer.
- Instant Starting — Automatic Shut-off.
- New Circuit-Breaker Prevents Damage.
- Cast Contruction . . . Built to Give Years of Service.

Write for New Literature!
Send for new illustrated brochure and specification sheets.

Manufacturers of Stools, Table Bases and Castomers for Restaurants and Soda Fountains.

Distributors in Principal Cities

THE CHICAGO HARDWARE FOUNDRY CO.
"Dependable Since 1897"
10111 COMMONWEALTH AVE.
NORTH CHICAGO, ILLINOIS

The President's Medal

Awards made by the National Safety Council for resuscitation by the Prone Pressure Method

WAYNE R. HAMILTON, lineman, Sacramento Municipal Utility District, Sacramento, Cal. — electric shock.

ELWOOD A. GALE, foreman, Sacramento Municipal Utility District, Sacramento, Cal.—electric shock.

A. L. TAYLOR, superintendent, Suwannee Valley Electric Coop. Inc., White Springs, Fla.—electric shock.

NOLAN VERRET, rotary helper, The Texas Co. Production Department, Franklin, La.—gas asphyxiation. Certificate of assistance to V. H. LEAGUE.

W. R. MORRIS, foreman, Public Service Co. of Oklahoma, Lawton, Okla.—electric shock.

OLIN E. MELOY, JR., station installer, The Southern New England Telephone Co., Cheshire, Conn.—drowning.

Whistle Announces Million Safe Hours

When your plant builds up an outstanding safety record, don't overlook any of the publicity angles.

As the Wincharger Corp., of Sioux City, Iowa, neared a goal of 1,000,000 safe man-hours, plans were made under the direction of Roy Barnum, Safety Director, to dramatize the occasion. On the morning of June 12, each employee received a copy of the following message from Robert Weinig, vice-president and general manager:

TO WINCHARGER EMPLOYEES:

Sometime today we expect Wincharger workers to have established a record of 1,000,000 man-hours without a lost-time accident. If this record is established, it will be announced to all employees by the sounding of the whistle announcing "One Million Safe Man-hours" in International Morse Code at 2:14 p.m. today.

Wincharger Workers are to be congratulated on having reached the one million man-hour mark in 1951 without having suffered a lost-time accident. From this standpoint our perfect safety record remains intact, and we continue to be in No. 1 position in the interplant safety contest in which Zenith, Rauland and we are participating. This record is one attained by very few industrial firms and you have proved that Wincharger employees, in addition to setting quality and production records, can also establish equally important safety records.

In this brief pause, during which you recognize your past achievement, we wish to commend each of you for your cooperation in working safely and also to remind you that during a single moment of forgetfulness, this fine record can be ended to the detriment of both yourself and the company. We therefore suggest that you continue to apply all safety practices to the best of your ability.

WEINIG

At 2:14 p.m. the whistle announced "one million safe man-hours." The man at the controls was Mr. Weinig who sounded out the International Morse Code without referring to his notes. While waiting for the whistle, department heads gathered around the scoreboard showing the standings of the plants participating in the Zenith interplant safety contest.

How to Buy the Best Gloves for the Job... At Lowest Cost!

N-54 All milled DuPont neoprene Stanzoils, heavyweight. Non-slip grip, curved or straight fingers.

PIONEER **Stanzoils**®

Smart buyers find it doesn't pay to buy one kind of glove for several different jobs, even if it's cheap. What pays is good protection for workers' hands PLUS gloves that make work easier and faster. Fit gloves efficiently to the job for more production — and new PIONEER catalog shows you how. *Unbiased advice, for Stanzoils include all kinds of liquidtight gloves:* all-neoprene, neoprene or plastic coated, 32 styles, weights, sizes, colors. You profit from scientific glove selection — write for this helpful catalog today!

Industrial Glove Division
The PIONEER Rubber Co.
637 Tiffin Road
Willard, Ohio

30 Years

Intensified Child-Safety Programs Urged

Concern that the employment of mothers in defense plants will mean an increase in fatal accidents among young children was expressed by the Metropolitan Life Insurance Company's statisticians. Such a rise in the death rate from accidents occurred among children at the preschool ages during World War II.

Currently accident fatalities at ages one to four in the United States total about 5,000 yearly. This is one fourth of all deaths at these ages and a far higher toll than that for any other single cause of death.

"Many young children could be saved if parents were more vigilant in guarding them from the wide variety of hazards to which they are exposed," the statisticians declare. "A greatly intensified child-safety program is particularly urgent at this time when many mothers are taking part in defense activities."

In a study of death claim records for insured children, motor vehicle accidents accounted for the largest number of deaths.

Burns and scalds ranked second to motor vehicles as the most frequent causes of accidental deaths.

Statement of the Ownership, Management, and Circulation required by the Act of Congress of August 24, 1912, as amended by the Act of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233).

Of NATIONAL SAFETY NEWS, published monthly at Chicago, Illinois, for October 1, 1951.

1. The names and addresses of the publisher, editor, managing editor and business managers are:

Publisher—National Safety Council, Inc., 425 N. Michigan Ave., Chicago 11.

Editor—Carman Fish, Chicago.

Managing Editor—None.

Business Manager—George E. Burns, Chicago.

2. The owner is: National Safety Council, Inc., an association—

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President—Ned H. Dearborn, Chicago.

Vice-Presidents—Guy L. Noble, Chicago; Dr. B. Armstrong, New York; J. E. Trainer, Akron, Ohio; Kenneth B. Colman, Seattle, Wash.; E. W. Kempton, Pittsburgh, Pa.; Boyd Lewis, New York; Dr. John W. Studebaker, New York; Thomas H. MacDonald, Washington, D. C.; Mrs. George W. Jaqua, Winchester, Ind.

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Secretary—R. L. Forney, Chicago.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustees or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show that the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semi-weekly, and tri-weekly papers only.)

CARMAN FISH, Editor.

Sworn and subscribed before me this 19th day of September, 1951.

PAUL H. STAEDKE
Notary Public

(My commission expires September 11, 1954)

For Safety

Guardi-Ann Hat

U.S. PATENT NO. 132996

Combines utmost protection and style. Exclusive patented features found in no other hat.

Write for Free Sample or Order Direct from us

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630 HIGH STREET
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Finest Floor Mat Made

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CUSHIONED MAT

Rubber Feet Give Positive Insulating Protection From Electrical Shock

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Oil-Spunj absorbs more oil and grease ... covers more floor and is economical because it can be used over and over.

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"We are adding thousands upon thousands . . ."

FRANK M. FOLSOM
President, Radio Corporation of America

"By a simple person-to-person canvass, we are adding thousands upon thousands of serious savers to our Payroll Savings Plan. Our employees are eager to contribute to the strengthening of America's defenses while they build their own security. They know that individual saving initiative means a blow at ruinous inflation. They know that is the line on which all of us at home can make our strongest fight."

"Thirty days has September." And every one of these September days is a D Day. In newspapers . . . magazines . . . over the radio . . . from the television screen . . . on billboards . . . contributed advertising will urge every American to "Make today your D Day. Buy U.S. Defense Bonds."

September days are "D" Days for management, too —*Decision Days.*

If you have a Payroll Savings Plan and your employee participation is less than 50% . . . or if you have not made a person-to-person canvass recently—consider this *your* "D" Day.

Phone, wire or write to Savings Bond Division, U. S. Treasury Department, Suite 700, Washington Building, Washington, D. C. Your State Director will show you how easy it is to increase your employee participation to 70%, 80%—even 90%—by a simple person-to-person canvass that places an application blank in the hands of every employee. He will furnish you with application blanks, promotional material, practical suggestions and all the personal assistance you may desire.

Your employees, like those of the Radio Corporation of America and many other companies will join by the hundreds or thousands because they, too, are eager to contribute to the strengthening of America's defenses while they build their own security. Make it very easy for them—through the automatic Payroll Savings Plan.

The U. S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

NATIONAL SAFETY COUNCIL

NEW SAFETY EQUIPMENT FOR INDUSTRY

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

Fluorescent Lamp

A basically new light source, the 400-watt J-H1 fluorescent mercury-vapor lamp is announced by Westinghouse Electric Corp., Lamp Division, Bloomfield, N. J.

Designed to provide a whiter light from a mercury-vapor source, the bulb has an inside coat of a phosphor that fluoresces red when activated by invisible ultraviolet light generated by the quartz arc. This

tends to balance the spectrum to provide a light that is white enough for most industrial purposes.

Equipped with a BT-37 bulb with an isothermal shape that provides an even operating temperature over the entire bulb wall, the new lamp will burn in any position and can be used in existing fixtures for 400-watt mercury lamps. Lower brightness of the lamp makes operation at lower mounting heights practical, which widens the field of use for mercury lamps.

In addition to industrial use, this new lamp can be used for flood lighting and street lighting. When used outdoors, fixtures should be enclosed to prevent cracking of the glass bulb by driving rain or large moisture-laden insects.

Detergent Spray

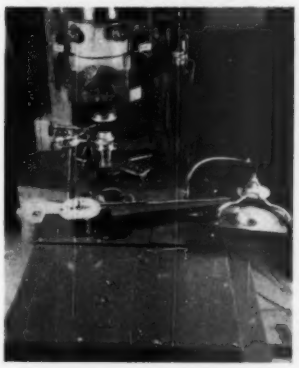
A non-irritating soapless detergent, S.S. Spray, designed for emergency use is ideal for industrial first aid dispensaries. Automatically dispensed, the spray is ready for immediate application for the quick removal of oil and grease from the injuries of industrial patients before the use of antiseptics or other medication.

No time or water is needed to develop a lather because the spray is automatically produced from a "Dispenseal" bottle and hermetically sealed against contamination. Ejection from this bottle eliminates waste, since the automatic level allows better control of the amount desired. It may also be used for the removal of ointment dressings and as a detergent for soap-sensitive skins. This is the product of Gebauer Chemical Co., 9410 St. Catherine Ave., Cleveland 4, Ohio.

Press Loader

Magnaflux Corp., 5900 Northwest Highway, Chicago 31, Ill., announces a new automatic punch press feeder known as Lodac. With this device mechanical "fingers" pick up parts after first draw and feed one or more consecutive redraw presses at speeds up to 1,200 parts per hour. Similar "fingers" remove the parts from the press to feed them on another conveyor to feed further press operations.

For a wide range of redraw operations this new automatic press feeder eliminates slow hazardous feeding. In actual operation, for a single redraw, press speeds have been increased from 540 pieces hourly to 1,040 pieces. The complete operation cycle is set by the speed adjustment of



the feeder. At the proper point after loading, the press is tripped by the feeder, with either electric or air triggering.

If the part is not removed from the die, a safety circuit stops feeder and press. However, if parts are not being loaded to the die, a "memory" circuit will continue to operate the press and feeder thus avoiding shutdown delays. After any shutdown, the "memory" circuit starts the feeder and press at the point of the cycle where it was last interrupted. The mechanical "fingers" are specially designed for parts to be handled, and are held in special chucks for quick change between press runs.

Defense Film

Cornell Film Co., 1501 Broadway, New York, N. Y., has released a new motion picture film known as *Target, U.S.A.*, which presents a guide for industry planning and preparation in the event of an atomic attack. The film runs 20 minutes and was written and directed by Herman Boxer, formerly of M.G.M. It is in full color and was filmed on location with a cast of professional actors.

Based on studies made by the National Security Resources Board with the assistance of the Department of Defense and the Research Institute of America, the film is a graphic demonstration of industry and personnel in action prior to and under an atom bomb attack. The film utilizes live action, animation, charts, graphs and other techniques to illustrate practical defense in terms of plants and personnel.

Cornell Films will distribute the film in both full color and black and white.

Safety Tongs

Magline, Inc., Pinconning, Mich., announces a new addition to their line of lightweight magnesium safety tongs. The principal feature of the new model is a tapered nose unit designed to facilitate handling of small stock. Weighing only 2½ ounces, the new tongs reduce worker fatigue and aid in keeping press and shear feeding operations at peak efficiency.

Manufactured from specially alloyed magnesium, the safety tongs are designed to crush if accidentally caught within the die opening, thus eliminating possibility of damage to costly dies. In addition to their lightness, the new safety tongs are engineered to give rigidity and long service life.

Floor Matting

A new type floor matting designed especially for use behind counters, in corridors, aisles, laundry rooms, and wherever workmen stand in one spot, has been announced by American Mat Corp., 1724 Adams St., Toledo 2, Ohio.

To be known as Air-Tred, this new mat is constructed of sponge rubber with a resilient, long wearing top surface. The matting does not stretch, mat or break down. It is moth-proof and easily cleaned by vacuum or damp mop. It affords comfort underfoot, silences footsteps and re-

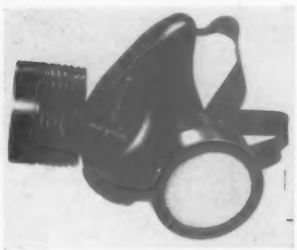
NEW SAFETY EQUIPMENT FOR INDUSTRY

Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

tards fatigue. It is available in maroon and black, ¼ inch thick, 36 inches or 48 inches wide, and length up to 60 feet.

Respirators

A new line of Bureau of Mines approved Chemical Cartridge Respirators is announced by Willson Products, Inc., Reading, Pa.



Known as the "800" Series, the line includes styles for protection against low concentrations of many common industrial gases and vapors, as well as metal fumes, mists and dusts. Principal features of the new respirators are: Newly designed facepiece, with feathered rolled edges for snug, comfortable fit. Exhalation valve positioned to minimize possibility of dust interfering with normal operation.

There is a choice of three cartridge sizes: 60 cc., 85 cc. and 100 cc. Double adjustable elastic headbands are included.

2-Way Radio

A new low-power 2-way radio that utilizes the Uni-Channel Sensicon receiver has been designed by Motorola Corp., 4545 W. Augusta Blvd., Chicago, Ill., to meet the demand of industrial radio installations.

The unit meets F.C.C. regulations that allow a maximum power input of 3-watts to the final amplifier for those industries where all 2-way radio communications are carried on within a single plant area. The low-power Uni-Channels can be installed, either as base stations or as mobile units. They can be mounted or used on fork-lift trucks or other intra-plant vehicles to speed materials movement, and reduce the number of vehicles needed.

These small, compact transmitter-receiver units are available either as a single package with built-in speaker and control head, or with individual speaker and control head. Models are available for operation from either 6-volt D.C., 12-volt D.C. or 117-volt A.C. primary power source.

Eye Shield

The Sellstrom one-piece lucite eye shield with 92½ per cent optical clarity by laboratory test is the story of one success being responsible for a secondary service. This No. 39 Eye Shield was originally designed by the Sellstrom Mfg. Co., 622 N. Aberdeen St., Chicago 22, as a lightweight, wide vision shield for eye protection in grinding and general shop work.

Almost immediately there was a demand for the same shield, but in a larger size to accommodate shell-rim prescription glasses. The manufacturer responded with a larger size and also a complete range of new sizes. The entire shield is actually a single lens. It is now available in 4¾ inches, 5 inches, 5½ inches and 6 inches.

Floor Covering

Fera-Mat, a new non-slip long-life floor covering designed to prevent slipping has been introduced by American Abrasive Metals Co., 460 Coit St., Irvington, N. J. The new product provides a non-slip walking surface composed of durable mineral granules which are resin-bonded to a heavy duty weatherproof cloth backing. It is available in cleats measuring 6 inches by 24 inches, or in rolls measuring 6 inches wide by 96 feet long. Rolls come only in black, but cleats are made in black, red and green.

Supplied with a protective liner on the underside which is peeled off at the time of installation, the new non-slip floor covering has a pressure sensitive adhesive which makes it adhere to any clean, dry and smooth surface. Being non-rigid, the floor covering permits reasonably heavy loads to pass over it without damage. The covering is recommended for steps, ramps, platforms, factory floors, walkways, washrooms, and many other places.

Fire Extinguisher

American-LaFrance-Foamite Corp., Elmira, N. Y., announces it has designed and placed on the market a new one quart air-pressurized fire extinguisher. It discharges vaporizing liquid fluid for extinguishing both flammable liquid and electrical type fires.

It aims and operates like a gun with trigger-quick action. It requires no pumping. Simply aim and squeeze the trigger. It is easily recharged by pouring in more vaporizing liquid and can be pressurized with any standard air chuck as commonly used in gasoline service stations. It is an ideal unit for protecting autos, motors, trucks, trailers, airplanes, street and railroad cars, and electrical equipment.

The new extinguisher is called the Alfco Pressurized Fire-Gun and carries the inspection label of Underwriters' Laboratories.

Floor Patching

Permanent repairs to chuck holes or breaks in concrete floors can be made easily and quickly during working hours by using Por-Rok Quick Setting Cement developed by The Hallemite Mfg. Co.,

NEW SAFETY EQUIPMENT FOR INDUSTRY

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

2446 W. 25th St., Cleveland 13, Ohio.

Application of this compound is fast and simple. Merely clean out the hole or break, mix the compound with water, and pour into the opening. The compound is self-bonding, will not shrink, and requires no trowelling for a perfect finish. The patch is ready for light loads in 15 minutes, normal trucking in 30 minutes, and heaviest loads within one hour.

Laminated Cloth

A flexible, protective cloth, called Ray-Foil, has been developed that protects personnel and equipment from high radiant heat and other high temperatures.

At the open hearth, no down time is required when rebuilding end or side wall burn-outs, because this new cloth can be set up between the heat and the wall section being rebuilt. It can be set up

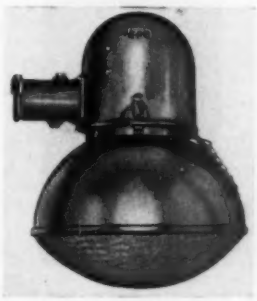
permanently between high temperature areas and bearing units and motors to reduce breakdown, grease consumption, bearing check-ups and oilers time and the destructive effects of radiant heat.

It can also be used in coke ovens, cement plants, ceramic industries, boiler rooms, powder plants, and many other places. It can be used as a curtain or drape, a shield to be carried, a heat or glare baffle, or as a stand shield with a portable, fire-resistant canvas wire shield designed to protect personnel and property from arc flash and welding sparks. Ray-Foil is also efficient when used for aprons, insoles, gloves and clothing accessories.

This cloth is available in 100 yards by 3 foot rolls, cut lengths 3 feet wide, Ray-Foil tape in 2 inches by 72 yard rolls, and on a 48 x 72 inch Spa-Fla shield. It is being distributed by Safety First Supply Co., 425 Magee St., Pittsburgh 19, Pa.

Outdoor Safety Light

Nepo Mfg. Co., 527 S. Wells St., Chicago 7, announces a new mercury vapor safety light which provides high intensity illumination for any critical area and has features that permit its installation where this type of lighting has not been used before. Successful applications include protective illumination of industrial property, freight terminals, docks and piers, and the lighting of parking lots, service areas, etc.

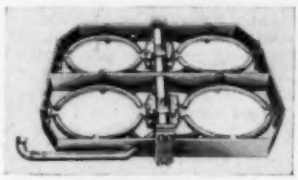


The new light is claimed to be more efficient than the conventional incandescent floodlighting and is permanently rustproof and weatherproof and weighs only 10 lbs. fully assembled. The 18-gauge polished ALZAK aluminum reflector is spun over the glass bowl and is permanently sealed to it by a patented process that assures lasting cleanliness of the reflector surface and greater safety. A wide variety of brackets, poles and clamp assemblies permits easy, quick installation at almost any site.

Dust Collector

Turner & Haws Engineering Co., 87 Gardner St., West Roxbury, Mass., builders of the Aeroturn Dust Collector, has developed a self-adjusting blow ring. The self-adjusting feature allows the ring to conform properly to the filter bag's circumference and will automatically align itself reducing wear and chafing of the bag to a minimum.

Each filter bag is circled by a self-adjusting blow ring which travels up and down the bag, flexing it slightly and directing the high pressure reverse-air-jet into the bag from all sides. The flexing and the jet combine to dislodge dust which has accumulated on the inside of the bag. The dust drops down into the hopper by gravity and the down-draft of the incoming air.

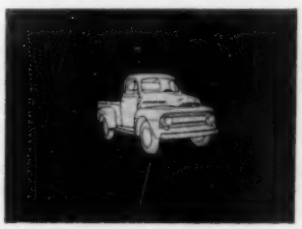


The self-adjusting rings hold the blow rings snugly in contact with the filter bag in spite of dimensional changes due to bag shrinkage or stretching. Each ring is made in two half-sections independently mounted on a common carrier assembly. The half-sections expand as necessary to conform to the bag's diameter as they travel the length of the bag, automatically adjusting to changes in the bag's diameter.

The entire blow ring assembly is so mounted that it floats laterally to compensate for possible vertical misalignment of the bag. Rings are precision aluminum castings. A narrow slot milled in the inner periphery of each blow ring section contacts the bag surface and directs a high velocity air jet through the bagwall for maximum clearing effectiveness.

Steel Bridge Flooring

Kerlow Steel Flooring Co., 222 Culver Ave., Jersey City 5, N. J., announces that IQ-35 rectangular steel bridge flooring is the safest, strongest, steel bridge flooring that they have ever made. This flooring, whether laid longitudinally or transversely on a bridge, will carry H20 loading on a 15 inch circle up to a span of 48 inches



and weighs approximately 19 lbs. It is made with grating parallel with traffic and transverse to traffic.

In the latter type, the transverse bars that the tires ride on are placed higher than the longitudinal bars, and the trans-

NEW SAFETY EQUIPMENT FOR INDUSTRY

Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

verse bars are serrated to enable tires to maintain or to develop greater traction for emergency stopping.

Another feature is the balanced construction of the grating. The grating is finished with a red, lead paint which was developed especially for this company by one of the leading paint companies to meet rigid specifications.

Fire Extinguisher

One-hand operation is one of the characteristics of the new Redi-Grip Pressurized Portable fire extinguisher now being marketed by Stop-Fire, Inc., 125 Ashland Place, Brooklyn 1, N. Y. This model has been inspected and labeled by Underwriters' Laboratories, Inc.

The extinguisher, adapted from an original design now being used by the U. S. Air Force, is available in 1, 2½ and 4 quart sizes and features a combination of charges—CBM (chlorobromomethane) or carbon tetrachloride, individually or in combination, and the expellent may be either air or carbon dioxide.

The extinguisher may be released from its bracket and operated with one hand, while a patented safety-lock prevents accidental discharge. The unit has been designed for a wide range of industrial and institutional fire hazards and includes among its features; a removable head readily disassembled for inspection, cleaning or adjustment; non-clogging nozzle, Teflon gaskets; silver soldered joints; flexible siphon tube for maximum discharge at any angle and a drawn brass shell.

The range of the extinguisher exceeds 30 feet and the discharge time of the one quart size is about 27 seconds at 70° F. For close fire fighting this unit provides over 160° of effective extinguishing action from one position.

News Items

Clarence J. Williams celebrated his fiftieth anniversary in the jewelry trade in September. In 1901, he joined the firm of A. L. Williams & Co., a jewelry trade shop operated by his father. In 1928 he started his own business, Williams Jewelry & Mfg. Co., following the industrial jewelry line, plus a personal following. These operations were later extended to include two subsidiaries—The Peerless Bronze Works and the Trophy and Medal Shop.

Mr. Williams is known throughout the country as a pioneer in safety, having made emblems, plaques and trophies for many of the largest companies in the United States. At the present time he is associated with his sons, Tex and Paul, with offices at 10 So. Wabash Ave., Chicago 3, Ill.

* * *

The appointment of Donald A. Knapp as District Sales Manager, New York office, has been announced by Fisher L. Boyd, President, National Foam System, Inc., West Chester, Pa.

Mr. Knapp has extensive experience in the field of fire protection, and has helped formulate several fire protection standards now in wide use. For ten years he was insurance surveyor with Bethlehem Steel Company. Prior to this, he was affiliated with the Board of Fire Underwriters of the Pacific. A graduate of the University of Nevada, Mr. Knapp holds an Electrical Engineers' degree. He is a member of the International Fire Chiefs Association, and the Society of American Fire Protection Engineers, and National Fire Protection Association.

The new Vestal home, adjoining the old quarters at 4963 Manchester Ave., St. Louis, Mo., has been recently completed and is now in use by the firm. It is a modern 2-story building, providing approximately 19,800 square feet of additional plant capacity, and 6,000 square feet of additional office space. Used in conjunction with the older Vestal building, it greatly increases warehousing space and production facilities.

* * *

Randolph Laboratories, Inc., 8 E. Kinzie St., Chicago, Ill., has just released a new two-color, 12 inch by 22 inch poster, which quickly tells employees the correct fire extinguisher to use on rubbish, wood, flammable liquid or electrical type fires. It is ideal for posting in the plant at strategic locations and for use in plant fire schools since it illustrates all standard type fire extinguishers, and graphically explains the proper use for a soda acid, pump tank, foam, carbon dioxide, carbon tetrachloride, and dry powder extinguishers. For quantity copies write direct to Randolph Laboratories.

* * *

R. B. Smith, who recently resigned from Diamond Alkali Co., of Cleveland, after being associated with them for the past eleven years, has been named Director of Sales of Treesdale Laboratories & Textile Processing Co. Prior to his association with Diamond Alkali he was Research Chemist for the Oklahoma State Highway Commission and held a graduate fellowship at Oklahoma A & M College where he received his M. S. Degree in organic chemistry.

In his new position, Mr. Smith will direct the sale of various types of flameproof, mildewproof and waterproof fabrics as well as specialty compounds for sale to textile and finishing plants for flameproofing, mildewproofing and waterproofing of textiles.

TRADE PUBLICATIONS
in the Safety Field

These trade publications will help you to keep up-to-the-minute on new products and developments in industrial health and safety equipment. They are free and will be sent by manufacturers without obligation to readers of NATIONAL SAFETY NEWS who are responsible for this work. Send in the coupon below checked for the publications you desire. Please make your requests promptly.

1. **"Algrip"**: Booklet illustrates uses of abrasive rolled steel floor plate for all types of walkway surfacing. Fabricating data and allowable load scale included. Alan Wood Steel Co.

2. **"Data Book"**: An enlarged catalog, No. 150, combining valuable engineering information with an extensive list of Laughlin's wire rope and chain fittings including many new products. Besides presenting detailed working characteristics of each product, specification tables are also given. Thomas Laughlin Co.

3. **Steel Stamps:** An illustrated folder on steel letters and figure stamps for various industrial marking applications. Knurled tapered sides and radiused holes are designed to ensure a protective grip. M. E. Cunningham Co.

4. **Grinding Wheel Guards:** Brochure describes various type guards for shaft equipment, angle grinders, sanders, polishers and other wheel grinders. The guards feature protection with adequate wheel exposure. Morrison Products, Inc.

5. **"How to Clean Metals in Aircraft Production"**: A 48-page illustrated booklet describing specialized materials, procedures and equipment for use in cleaning and related processing of metals in aircraft production. Helpful recommendations on equipment are also presented. Oakite Products, Inc.

6. **"Exit Lock"**: Folder complete with diagrams of various emergency exit lock installations. Locks are designed to provide tamper-proof protection yet can also be immediately opened for emergency use. Approved by Fire Protection Association. Exit Lock Co.

7. **"Whiting Bag Type Suppresser"**: Announces a recent innovation for the efficient control of air pollution due to smoke, fumes and dust. The Whiting Bag Type Suppressor was developed to meet the particularly stringent requirements of foundries, furnaces, and other sources of dust in hot gases. Whiting Corp.

8. **"The New Baker"**: Eight-page specification bulletin No. 1326, featuring the new Baker type FC fork truck. The bulletin contains dimension drawings showing the maneuverability of this truck, along with specifications which permit comparison of the truck with other fork type industrial trucks. The Baker-Raulang Co.

9. **"Sanitation Handbook"**: A colorful new 48-page handbook which deals with sanitation and maintenance of all modern building installation. Designed for quick reference. Huntington Laboratories, Inc.

10. **Safety Devices for Steam and Hot Water Boilers:** Supplemental, 20-page catalog has comprehensive specification charts and descriptions of feeders, liquid level controls, float controls, relief valves and related devices. McDonnell & Miller, Inc.

11. **Bulletin No. 130:** Informative brochure illustrating and describing unusual scaffolding applications, such as racking down, shortening up spans, single bracing, etc. Universal Mfg. Corp.

12. **"MSA Skullgard"**: New illustrated booklet designed to stimulate wearing of protective hats. Illustrated examples of the use of protective headgear in avoiding serious injury precede a section devoted to the care of the MSA Skullgard. Mine Safety Appliances Co.

13. **Foam Fire Protection:** Folder announces a new liquid type mechanical foam for extinguishing fires caused by polar solvents or petroleum products. National Foam System, Inc.

14. **Self-made Machine Guards:** Information on how to construct all types of machine and belt guards on the job. Perforated angles, bands, gussets and detachable floor posts and sockets are described together with the perforated sheet steel used for guard material. The Harrington & King Perforating Co.

15. **"Electric Doorman"**: Bulletin No. CC describes the applications, and construction features of "Electric Doorman" automatic gate operators, for all types of swinging and sliding gates. General specifications and a typical erection plan are also included. Electric Power Door Co.

16. **Wire Glass for Fire Protection:** Catalog No. 51 shows new designs in wire glass for use in doors, windows, transoms, etc., as protection against the spread of fire. Suggestions as to where and how this glass may be effectively installed are included. Mississippi Glass Co.

17. **Expanded Metal Gratings:** Literature illustrating the safety uses of metal grating for non-slip walkways, machine guards and wall furring. Ample specification tables and suggestions for installation are provided. Wheeling Corrugating Co.

18. **"Berylco Safety Tools"**: Complete catalog of Berylco Safety Tools made especially to reduce the danger of explosion due to sparks. In addition, these tools are non-corrosive and non-magnetic. The Beryllium Corp.

NATIONAL SAFETY NEWS

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NOVEMBER, 1951

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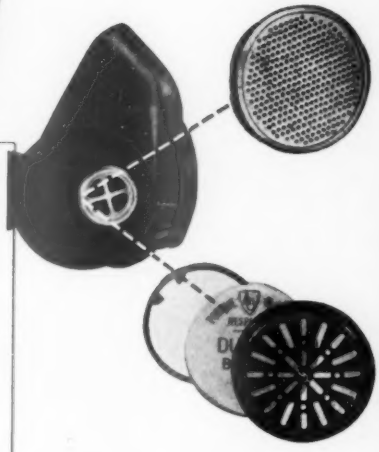

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